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Vol. XV GRAND RAPIDS, MICHIGAN, DECEMBER, 1916 No. 12

Original Articles

SARCOMATOUS DEGENERATION OF UTERINE FIBROIDS WITH REPORT OF EIGHTEEN CASES.*

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PETOSKEY, MICH.

Of all the neoplasms affecting the uterus, sarcoma is the most uncommon type, forming about 2 per cent. of all uterine tumors and about 4.8 per cent. of the malignant types (1)

As to the origin of these growths, we may say they may be considered to arise from three sources, namely:

(a) Arising from the mucosa.
(b) Arising from the uterine wall.
(c) Arising from degeneration in pre-existing myofibromata.

It is with this latter type only that I wish to deal. The material is from the service of Professor Reuben Peterson, head of the Department of Gynecology and Obstetrics in the University of Michigan, and covers 6,084 cases of pelvic pathology. In this number there were twenty-one cases of sarcoma, eighteen of which resulted from degeneration of fibroids.

CASE I. Mrs. B. J., age 52, American, housewife. Admitted September 15, 1903. Has history of tuberculosis in one brother and one sister. Menses at 14 years, negative. One child. Her pelvic trouble is about twelve years standing. Two months before entering the hospital she began having uterine hemorrhages, lasting about ten days at a time. There was a dark colored constant discharge, bright red at times which is now beginning to have a foul odor.

Examination.—The os is about the size of a quarter, patulous; projecting from it is a grayish, fibroid-appearing mass. The uterus is about the size of a cocoanut.

Operation.—September 16, 1903. A longitudinal incision was made in the posterior lip, the hand introduced into the vagina and the mass separated with the fingers.

Pathology.—A somewhat grayish appearing encapsulated growth, spherical in shape, measuring about 6 centimeters in diameter. On section the central portion of the tumor is pinkish in color, differing from the appearance at the periphery. The pinkish area yields abundant cellular material on scraping.

Microscopically.—A section from the central portion of the tumor shows the characteristic structure of a spindle celled sarcoma.

Second Operation.—October 8, 1903. Vaginal Hysterectomy. The uterus measures 11 x 7 x 4 centimeters, is greatly elongated and the cervix is excavated the canal being somewhat extensively dilated. About 4 centimeters above the internal os the mucosa is apparently normal. Extending into the uterine cavity is a small submucous fibroid. There are also a few smaller interstitial fibroids in the anterior wall. No further evidence of sarcoma could be found in the uterine mucosa or the small fibroids. No enlarged pelvic glands were discovered.

October 1, 1905. A letter from her home physician reports no signs of any recurrence.

CASE II. Mrs. E. T., age 49 years, American, housewife, widow two years. Admitted Feburary 9, 1904. One sister died of pulmonary tuberculosis. Personal history negative. Menses at 16 years, regular every twenty-eight days. Three children, the oldest 26, the youngest 17. Instruments at the second birth. Chills and fever after the last child. She first noticed trouble in the pelvis in 1899 when she began flowing excessively at time of her periods. This has continued more or less constantly ever since. For the last six weeks the flow has been of a lighter color than usual and there has been some odor.

Examination.—There is considerable distension of the abdomen which is marked on the left. The umbilicus does not protrude, superficial abdominal veins are not enlarged. Palpation reveals a hard mass in the median line extending within 4 centimeters of the umbilicus. Laterally it reaches 10 centimeters from the median line on the left and to within 6 centimeters of the anterior superior spine. To the right is a movable growth about the size of a turkey's egg situated near Poupart's ligament. There is a mass in the right iliac region the size of a hen's egg which slips out from under the fingers easily. Vaginal examination shows the clitoris to be free, the external and internal perineum torn. The cervix points backward, the uterus is movable, irregular, and is made up of irregular nodular masses continuous with the masses described above. The lungs show weak vesicular breathing with a slightly prolonged expiration. There are squeaking rales over both apices and under both claviscles.

Operation.—February 19, 1904. The abdomen was opened by a median incision 13 centimeters in length.

*Read before the Section on Gynecology and Obstetrics, M.S.M.S., 51st annual meeting, Houghton, August, 1916.

In packing back the intestines a blood cyst of the right ovary was ruptured. The left ovary also contained a large blood cyst. The uterus was enlarged and nodular, removed by supravaginal hysterectomy, including with it both tubes and ovaries.

Pathology.—The uterus measures 13 x 8 x 8 centimeters. The fundus extends 5 centimeters above the insertion of the tubes. There are few adhesions. On section through the anterior wall of the uterus there is found internally a submucous growth springing from the fundus measuring 8 centimeters long by 6 centimeters wide and filling the entire uterine cavity and reaching within 1 centimeter of the internal os. The lowest portion of the growth is softened and necrotic presenting on one side a small cavity formation. Microscopical examination shows a myofibroma with hyalin areas, other areas are exceedingly cellular the nuclei of the cells are irregular and the cells themselves take on a deeper stain. These latter areas are typical of beginning myosarcoma.

The patient made an uninterrupted convalescence, the wound healing by first intention. She was discharged March 23, 1904. In May of the same year a letter from the patient states she is feeling quite well and strong. December 27, 1904 her home physician reports the patient in poor condition due to pulmonary tuberculosis. February 25, 1905, patient died from the pulmonary condition. Her physician reports an apparent cure from the pelvic trouble, death being due entirely to the pulmonary condition.

CASE III. Miss M. H. Admitted September 24, 1904, age 30, weight 150 pounds. Father died of stomach trouble. Patient has always enjoyed good health until a year previous to entering the hospital.

Menstrual History.—Negative.

Present trouble began in March, 1904 with severe pain across the back and above the hips which was aggravated by being on her feet. An aching pain was most frequent. The periods occurred every two weeks lasting slightly longer than usual. The pain was accompanied by a feeling of pressure on the bladder. She has chronic constipation with difficult evacuation of the bowels at times. There is a constant feeling of pressure in the lower pelvis.

Examination.—October 1, 1904. The abdomen is pendulous with a large amount of adipose tissue. Clitoris free, external and internal perineum intact. The cervix is conical and lies low down in the pelvis. There is a mass in the pelvis about the size of a cocoanut connected with the uterus, this occupies more of the left side than of the right. The appendages are not palpated.

The heart and lungs are negative.

Operation.—October 14, 1904. The abdomen was opened by a 16 centimeter median incision. A small amount of ascitic fluid escaped when the peritoneum was opened. An irregular shaped tumor of the uterus presented. The uterus was amputated at the level of the internal os.

Pathology.—The uterus itself is small, measures 3.5 x 3.5 x 2.5 centimeters, while springing from the anterior and posterior surfaces are numerous hard, firm growths varying in size from 2 millimeters to 6 centimeters in diameter. Some are sessile, others pedunculated. The cut surface of these growths shows the characteristic whorled appearance of myofibroma. Scraping the cut surface of one of the larger growths yields some cellular material.

Microscopical examination of the growths are all typical myofibromata, while sections from the one mentioned in particular shows here and there areas of increased cellularity, the cells have no characteristic arrangement but take the stain more deeply, have irregular nuclei and very little connective tissue between the cells.

Diagnosis.—Myofibroma with beginning myosarcoma.

Post Operative.—The wound healed November 11, 1904, there having been a slight infection of the wound with an accompanying temperature ranging from 100-101.2. Otherwise the convalescence was uneventful. Discharged November 19.

May 21, 1905. A letter from the patient states that she has been unable to do any work since returning home and that she has been obliged to wear an abdominal support.

CASE IV. Mrs. M. E. H., American. Dressmaker. Admitted October 12, 1906. Mother died at 54 and one brother at 50 of cancer of the stomach. The patient is the ninth of eleven children of whom seven are living. She had typhoid at twenty, otherwise her personal history is negative. Menses at 13. Last period in July 1905, always regular every twenty-eight days. No pain with the periods, no leucorrhea. Married at 31. Five children, all living. The oldest is 30 and the youngest is 12. No history of puerperal sepsis. The patient weighs 153 pounds and is of good general appearance. Heart and lungs are negative.

Eighteen years ago she noticed a lump about the size of an English walnut above the umbilicus which gradually increased in size until it was about the size of a man's fist. Occasionally it is tender but never causes any severe pain. Two weeks before entering the hospital she had a severe pain in the right side of the pelvis which lasted about twenty-four hours and was accompanied by a chill on the evening of the onset, followed by some rise in temperature. She has been very tender on this side since the attack but the pain has gradually disappeared.

Examination.—The abdomen is rich in adipose tissue. Tender over the lower portion in the median line. Through the vagina the uterus is very large, backward and quite firmly fixed in the pelvis. The appendages are not distinctly made out.

Operation.—October 19, 1906. Median abdominal incision 14 centimeters in length. Upon entering the peritoneal cavity a smooth tumor resembling a bicornuate uterus came into view. The omentum was adherent to the fundus for about 7 centimeters and showed signs of recent inflammation. This was tied off and removed. The uterus was also removed by amputation through the cervix, taking with it both tubes and ovaries. The tumor in the abdominal wall proved to be a simple lipoma. The patient made an uneventful recovery and was discharged on November 12, 1906.

Pathology.—The uterus measured 9.5 x 8.5 x 6.5 centimeters. The surface of the anterior right fundus shows a few fine vascular adhesions. The fundus is the seat of two symmetrical fibroids, each about the size of an English walnut, having a slight sulcus

between them which gives the uterus a bi-lobed appearance. The uterus itself is pushed backwards and to the right in a horizontal direction, the growths being in the anterior fundus. On section, the anterior wall measures 0.5-3.0 centimeters, in thickness, the fibroid on the left side on section is markedly injected, softened and presents necrotic appearing areas. On scraping with the knife these areas yield some cellular material. The mucosa is hyperplastic, thickened and deeply injected over the entire surface. The tubes are negative, the ovaries atrophic and hyalin. Microscopical examination of sections taken from the growth presenting the injected, necrotic appearing areas shows a beginning sarcomatous change which to all appearances is as yet limited to the growth in which it is found. The fibrous elements have lost their characteristic whorled appearance which is found in fibroid growths and in their place are cells of less regular outline, somewhat smaller on the whole, having large irregular nuclei which take the basic stain more deeply, making them readily noticeable to the examiner. No glands were removed from this case as it was supposed to be clinically a case of fibroids only.

An indirect report two years later states that the patient is enjoying good health.

CASE V. Mrs. M. F., American, housewife. Weight 132 pounds, age 47. Admitted February 5, 1907. Family history negative. She was frail as a child, had typhoid at 15 which was followed by erysipelas. Menses began at 14, with very little pain at the periods and the flow shows nothing unusual. Married 29 years and has never been pregnant. In December, 1905 she began having a sensation of pressure in the region of the bladder causing frequent urination which would often necessitate getting out of bed as frequently as twelve times during the night. Sometimes she would have some trouble in getting the urine started. At times she has been able to feel a mass in the lower abdomen when lying on her back. She has not noticed any increase in size of this mass for the year previous to her entrance to the hospital. She tires very quickly when walking.

Examination.—February 5, 1907. Temperature 98.2°. Slightly enlarged thyroid. Thoracic organs negative. The abdomen shows a slight elevation just above the pubis, more on the left then on the right side. Palpation reveals a mass extending on the left upwards to one hand's breadth below the umbilicus. Downwards it reaches to Poupart's ligament. On the right side it cannot be felt above Poupart's ligament. The mass is very tender and immovable. The entire pelvis is blocked by an immovable mass connected with the mass palpated above. It is very hard and imparts no sense of fluctuation.

Operation.—February 15, 1907. The abdomen was opened by a median incision 14.5 centimeters in length. There was a small amount of ascites present in the peritoneal cavity. The large tumor was found firmly wedged in the pelvis. This was elevated and removed together with both tubes and ovaries by amputation through the cervix.

The patient made a steady convalescence and was discharged March 7, 1907.

Pathology.—The uterus is the seat of an irregular mass measuring 14 x 11 x 10 centimeters. The superior surface is covered by numerous adhesions. Springing from the anterior wall are two small fibroid growths, one is about two centimeters in diameter and is attached to the uterus by a thin band of serosa 1 millimeter in diameter, the second one is slightly larger than the first, lies just beneath it and is sessile. Springing from the posterior wall and comprising the greater part of the mass is a large intramural fibroid 9 centimeters in diameter. This has an irregular enlargement on the right side 6.5 centimeters in diameter. The uterine mucosa is everywhere atrophic. On cutting through the largest growth there is found a softened central area which is not found in any of the other nodules, this area yields some cellular material on scraping. The color is somewhat more grayish than the surrounding portion of the tumor. A microscopical section through the softened area shows a picture very similar to the one described in the preceding case except that the condition is a little more advanced.

Diagnosis.—Myofibromata, the larger nodule showing a beginning myosarcoma.

CASE VI. Mrs. M. W., American, housewife, age 62. Admitted October 2, 1907. One maternal and one paternal grandmother died of cancer. Married at 22, five children, menopause at 47. Flow recurred at 53 and became almost continuous for four months, then stopped. At this time she noticed a tumor in the left lower abdomen the size of a walnut. This apparently disappeared and she was well for seven or eight years. More than a year ago the tumor reappeared and has grown slowly toward the right. During the summer of the present year (1907) she had several slight hemorrhages. No pain but a slight tenderness on the right side. Considerable offensive vaginal discharge the last few weeks.

Examination.—There is an abdominal swelling reaching from the pubes to the umbilicus symmetrical in outline, reaching to within one finger breadth of either anterior superior spine, slightly nodular on palpation with dullness over the surface of the growth. Measurements:

Umbilicus to pubes 22 centimeters.

Umbilicus to right anterior superior spine, 14 centimeters.

Umbilicus to left anterior superior spine 18 centimeters.

Circumference around body at highest point of tumor, 94.5 centimeters.

There is a greenish brown discharge from the vagina and the os admits the finger tip. The cervix appears continuous with the growth above.

The urine shows a trace of albumin. The blood an increase of leucocytes.

Operation.—October 11, 1907. Median incision 6 inches. The peritoneum and pelvic were very friable. The blood vessels ruptured in attempting to elevate the tumor. A loop of bowel was adherent to the infundibulo pelvic ligament almost to the tube. The right tube was adherent posteriorly and was excised separately. The uterus was amputated and removed. A small mass the size of a hickory nut was found between the folds of the broad ligament just to the left of the cervical stump. This

was multinodular and friable, having a malignant appearance. A similar smaller growth was removed from the right broad ligament.

Pathology.—The uterus is symmetrically enlarged with adhesions along the lateral borders. The peritoneal surface over the fundus presents many small, elevated, subserous nodules of grayish yellow color which are hard and vary in size from 1 to 5 millimeters. A larger subserous nodule 3½ centimeters is just posterior to the right cornua. This nodule has a granular surface. The uterine wall is soft and its vessels congested. The posterior wall measures 1 to 1.5 centimeters. The endometruim appears to be of uniform thickness throughout. Springing from the anterior surface of the inner wall at the fundus is a pear shaped growth about 12 x 10 centimeters. This protrudes from the cervix through the external os presenting an anterior short lip and a posterior long lip with a sulcus between. This growth is soft and externally smooth, of a blotchy cream color. On section it shows interlacing bundles of fibrous tissue with a more cellular soft structure between the mesh-like network.

Left tube, 8 centimeters long, 5 to 8 millimeters in diameter. On the under surface are several firm nodules up to 2 centimeters in diameter. The walls are thickened at these points.

Right tube—Very similar to left.

Nodes from broad ligament are about eight in number and vary in size from 1 to 3 centimeters in diameter, having a somewhat fibrous cortex extending in strands into the growth. In the spaces between the strands is a material very similar to that found in the long tumor occupying the anterior uterine cavity.

Diagnosis.—Myosarcoma of uterus with extensive metastoses in uterine wall, broad ligament, ovaries and tubes. Undoubtedly an example of myofibroma undergoing sarcomatous change.

For the history of the following cases I am indebted to Dr. Frederick Loomis of the Gynecological Staff at the University of Michigan.

CASE VII. Mrs. A. B., age 45.

Present Trouble.—Patient comes to the hospital because of growth which comes down through the vagina, and for hemorrhages of two years' duration.

Operation.—Vaginal anterior and posterior hysterotomy. Excision of polyp. Curettage. Date, Nov. 22, 1910.

Source of Material.—Small amount of curettings and a submucous cervical polyp about the size of two walnuts. The polyp was pear shape, soft, very much reddened and injected. Upon section shows ordinary fibroid tissue with very marked edema. No macroscopic evidence of malignancy.

Pathological Report.—Curettings, glandular hyperplasia. No malignancy. Polyp myosarcoma. Metastasis not likely to occur. Base of polyp should be excised.

CASE VIII. No. 3633. Mrs. J. D., age 40. Present trouble: Patient comes to Hospital because of headache, backache, constipation and flowing between periods. Periods last from twenty days to three months. For the past year has felt mass in lower abdomen.

Operation.—Dilatation and curettage. Supravaginal hysterectomy. Bilateral salpingo-oophorectomy. Date, August 23, 1910.

Source of Material.—Uterus, both tubes and ovaries. Uterus enlarged, 8 x 7 x 5 centimeters. Is the seat of a general fibroid mass. From the superior peritoneal surface a small fibroid the size of a hickory nut arises. The large fibroid is in the posterior uterine wall. The perintoneal coat is not adherent. The endometrium is atrophic and congested. No degeneration changes in tumor. Tubes: right 6 centimeters long, patent, not adherent, fimbria free, lumen patent, negative upon cross section. Left similar to right. Right ovary measures 3 x 2 x 1 centimeters apparently normal. Left ovary measures 3 x 2 x ½ centimeter.

Pathological Report.—Very cellular leiomyofibroma becoming fibro sarcoma, atrophy of endometrium. Chronic passive congestion. Fibroid tubes. Hyalin ovary. Received a letter from patient four months later, she was feeling well with the exception of some backache and menopausal symptoms.

CASE IX. No. 3864. Miss W. D., age 21. Present trouble: Patient comes to Hospital because of bleeding and a deep seated pain in medium line. Duration one year, one month.

Operation.—Dilatation and Curettage. Vaginal cesarean section for submucous fibroid of posterior wall. Date Feb. 14, 1911.

Source of Material.—Many small pieces of submucous fibroid which are very soft, removed by vaginal cesarean section. Altogether the tumor is the size of a big English walnut.

Pathological Report.—Atrophic tube, chronic congestion. Leio myo fibroma with an area of large giant cells embedded in muscle tissue. Aside from the area of giant cells no other evidence of same tumor which was undoubtedly a myo sarcoma. Ovary is cystic. Cervical catarrh and unhealed erosion.

Second Operation.—Bilateral salpingo-oophorectomy. Pan hysterectomy. Gall bladder and appendix negative.

Source of Material removed from second operation: Uterus, tubes and ovaries removed by pan hysterectomy. Uterus is small, very soft, symmetrical, pear shaped, measuring 7 centimeters in length, 3 centimeters in width and 2 centimeters in thickness. It is free from adhesions. Upon longitudinal section the uterine wall measures 1-1.5 centimeters in thickness, the endometrium having been removed by previous curettage. From the posterior wall, about midway between the external os and the fundus is a small excavated area, the base of which appears brown. About it are several hemorrhagic areas of endometrium. There is no evidence of any infiltration about. This is undoubtedly the attachment of the polyp removed at her previous operation. The tubes and ovaries are in all respect similar to one another. The tubes measure 8.5 centimeters in length, are both free from adhesions. The fimbriated extremities are free and patent and they look very normal. The ovaries are of the same size, measuring 4.5 x 3 x 1¾ centimeters, free from adhesions. Upon longitudinal section are quite edematous showing all stages of ova, corpora lutea and Gaffian follicles.

Pathological Report.—Malignant tumor, alveolar sarcoma with small cell nests. April 25, 1911, received a letter from patient saying that she was feeling fine, gaining in strength every day.

CASE X. No. 4293. Mrs. C. G., age 44. Present trouble: Comes to Hospital for burning in lower abdomen, and dull headache from occiput to eyes. Contracted gonorrhea and syphilis fifteen years ago. Vaginal discharge and severe menstrual flowing. Treated for her venereal and syphilitic condition. Has a mass in abdomen.

Operation.—Supravaginal hysterectomy. Bilateral salpingo-oophorectomy. Date January 22, 1912.

Source of Material.—Uterus, tubes and ovaries, and the remains of two cyst walls which are mutilated far beyond description. Uterus measures 8 x 4 x 9 centimeters. On its posterior surface are the remains of old adhesions. The tubes are thickened. The left ovary measures 9 centimeters, the right measures 10 centimeters. On the left side there is a mass of unrecognizable tissue, probably remains of cyst wall, extending from the upper pole of the uterus. The myometrium measures 2.5 centimeters. On section, one or two small pin head fibroids of myometrium. Posterior surface is covered by remains of old, dense adhesions. Appendages are badly mutilated.

Pathological Report.—Cervical catarrh. A very cellular myoma, so cellular is probably a myo-sarcoma. Miliary tubercules. Large monolocular cyst of the ovary with thick hyaline wall containing some lime salts and blood pigment. Areas of inflammation throughout the broad ligament; chronic purulent salpingitis nearly healed. Chronic interstitial and glandular endometritis. Jan. 28, 1916, developed peritonitis third day and died on this date.

CASE XI. No. 4480. Mrs. B. C., age 35. Present trouble: Patient comes to Hospital because of irritation in the region of the bladder, and a sense of pressure in lying down. Duration two years. Backache accompanied present trouble.

Operation.—Myomectomy. Date July 2, 1912.

Source of Material.—Irregular fibroid tumor, oblong, in shape. Measures 7 x 4.5 x 5 centimeters. Surface is smooth and there are no adhesions. Surface is pale with numerous injected vessels radiating from the point of attachment to the pedicle. The pedicle measures about 15 millimeters in diameter. On section the tumor is firm and the cut surface has a whorled appearance.

Pathological Report.—A very cellular leio myoma. A myo-sarcoma. Discharged July 18.

Patient returned August 5.

Operation.—Myomectomy. Panhysterectomy. Bilateral salpingo-oophorectomy.

Source of Material.—Uterus, tubes and ovaries. The uterus measures 9 x 6.5 x 3.5 centimeters. The surface is generally smooth, except posteriorly on the right side, there is a small patch of adhesions. On the anterior surface at the upper part of the cervix is a small, round nodule projecting over the surface. This measures 2 centimeters in diameter. The endometrium is pale pink, rather abundant, soft, can easily be scraped off. The right tube and ovary are apparently normal, no adhesions. The tube measures 7 centimeters by ¾ in diameter. The end is open. The ovary measures 3¼ x 2 centimeters by 1 centimeter. The cut surface show a few healed cysts. The left tube and ovary are similar in every way. The right tube measures 9 centimeters long by ¾ in diameter. The ovary measures 3.5 x 2.5 x 1.

Pathological Report.—Hyalin ovary. Chronic tubo-ovarian adhesions. Old healed salpingitis, endometritis, marked proliferation of walls of blood vessels in ovaries. Small tubercle in endometrium. Discharged August 23. Died October, 1915.

CASE XII. No. 4625. Mrs. E. M., age 47. Present trouble: Patient comes to Hospital because of excessive flowing and thin watery discharge, sometimes offensive, onset six years ago; three or four years ago noticed an enlargement in abdomen which felt like fluid.

Operation.—Anterior colporrhaphy. Hysterectomy. Excision of polyp. Date October 11, 1912.

Pathological Report.—Leiomyofibroma with very cellular atypical areas. Beginning myo-sarcoma.

CASE XIII. No. 5090. Mrs. E. R. age 29. Present trouble: Patient comes to Hospital on account of painful menstruation of about four months' duration, also for a mass in abdomen which she has noticed for about one month.

Operation.—Supravaginal hysterectomy.

Source of Material—Large fibroid tumor measuring 17 x 12 x 9 centimeters after splitting. The tumor shows beginning hydropic degeneration.

Pathological Report.—Leio-myo fibroma. Some areas are so cellular as to raise a suspicion of myo-sarcoma. August 6, 1913 discharged against advice.

CASE XIV. No. 5286, age 43. Present trouble: Patient comes to hospital because of pain in lower abdomen, and backache for past five months. Tender across abdomen; duration of flow lessened from one week to four or five days; regular but very much more profuse in amount; six to seven napkins per day; leucorrhoeal discharge more profuse within past five months. No difference noticed in abdomen but has felt something like tumor mass in vagina for past year.

Operation.—Supravaginal hysterectomy. Bilateral salpingo-oophorectomy. Appendectomy. Date Oct. 21, 1913.

Source of Material.—Uterus, tubes and ovaries and appendix. The uterus was amputated supravaginally above the cervix. It was very irregular in form having the appearance of a double organ due to the fact that over the left posterior side there was a large fibroid nodule as large or larger than the uterus itself, measuring about 7 centimeters in diameter. The uterus itself was somewhat irregular, measuring about 8 x 6 x 5 centimeters and the wall being of uniform thickness throughout, 2.5 centimeters. From the anterior surface just above the cervix are two subserous fibroids nodules side by side about as large as a hickorynut. The posterior surface of the uterus shows evidence of numerous old dense adhesions. On section there seems to be numerous other smaller fibroid nodules situated in the body of the muscle, also just under the mucosa. The endometrium appeared normal. The nodules on section appear to be glistening and yield no scrappings. The left tube appears as a large distended

sac, about 5 centimeters in diameter, very thin walled and contains a brownish fluid. The left ovary is somewhat larger than normal, is flattened and quite fibrous. The right tube appears larger, thicker and firmer than normal, being about 1 centimeter in diameter. The right ovary shows changes similar to the left. The appendix is about 5 cubic centimeters and shows no concretions or constrictions. The distal half is covered over each side with large amount of fat. There are remains of old adhesions throughout the entire length.

Pathological Report.—Appendix; lymphoid hyperplasia. Increase of connective tissue; tube, old hematoma; the plications are filled with phagocytes containing hemosiderin; large corpus luteum in ovary. Endometrium, marked glandular hyperplasia. Interstitial inflammation. Myofibroma. Cystic cervical glands with chronic catarrh, small areas of atypical hypertrophic muscle; myosarcoma. One portion of a larger myoma shows very atypical muscle cells.

CASE XV. No. 5439. Age 50. Present trouble: Patient comes to Hospital because of pain in lower abdomen, back, and down limbs. Duration two months. For past two months has felt mass just above pubis the size of a hen's egg, very tender but has noticed no change in size. Unable to retain urine when on her feet; periods regular up to two months ago but have been more excessive for past three years; skipped two periods previous to the last one.

Operation.—Dilatation and curettage. Perineorrhaphy; supravaginal hysterectomy; left saplingo-oophorectomy, appendectomy. Date Jan. 2, 1914.

Source of Material.—The specimen consists of appendix, uterus with one tube and ovary, and a small amount of normal appearing curettings. Uterus removed above cervix; in the wall of the uterus are two small fibroid nodules, one at either horn, giving the appearance of a bicornuate uterus. There are also smaller nodules scattered about the wall. The largest of the fibroid nodules measures 4 x 4 x 6 centimeters. The next largest is about the size of a small hen's egg. The uterine cavity is negative. The tube is very small, and atrophic, otherwise negative. The ovary is large, soft and cystic.

Pathological Report.—Very small fragments of curettings containing cystic glands. Multiple small myofibromata. A larger one is very cellular, with atypical cells. Myo-sarcoma. Prognosis guarded, although on the whole it is good because of the very thick capsule on this growth and the fact that the cellular changes are more central. One tube is normal, the other shows a very marked fibroid healed salpingitis. Fecal concretion in appendix. Atrophy of mucosa. Hyalin ovary. Small organizing blood clot on ovary.

CASE XVI. No. 5448. Age 50. Present trouble: The patient comes to the Hospital because of pain in left pelvis, with backache; for seven years patient has had pains in back, radiating down thigh, at which time she noticed a mass in the abdomen about the size of a walnut; this is tender, and has increased rapidly in size within the past six months.

Operation.—Supravaginal hysterectomy. Date January 2, 1914.

Source of Material.—Uterus which is removed above the cervix. In the posterior wall is a large fibroid mass measuring 11 x 9 x 9 centimeters. This mass on section has the appearance of a medullary carcinomatous change. The cavity of the uterus is rather large, and the mucosa is hypertrophied, soft and friable, measuring about 3.5 centimeters in thickness. The wall of the uterus, lying over this mass is rather soft. The specimen is very soft and is suspicious of a pregnancy. This, however, was not the case.

Pathological Report.—Leiomyfibroma. Hyalin in part, in part showing edema. Very cellular areas. Myo-saroma developing in a leiomyofibroma. March 2, 1914, received a letter from patient saying she was feeling fine.

CASE XVII. No. 5645. Age 40. Present trouble: Patient comes to the Hospital because of excessive bleeding which began after last period, March, 1914, flowed normally from March 2-5, for about three weeks; in bed two weeks. Slightly nauseated, vomited on one occasion, vomitus not bloody. She has thought from own examination there seemed to be tumor mass present.

Operation.—Supravaginal hysterectomy; bilateral salpingo-oophorectomy. Appendectomy. Date April 14, 1914.

Source of Material.—Uterus, both tubes and ovaries and appendix. Uterus amputated above the cervix, very large and irregular in form, measuring approximately 10 x 10 x 6 centimeters, very irregular due to the presence of numerous fibroid nodules in size varying from that of a pea to that of a small egg, several of which are situated sub-serously with a rather pedunculeated base, others are interstitial, and several encroach upon the mucosa. Nodules upon section are firm, fibrous, glistening, contain little or no blood and yield no scrapings. Several of the nodules appeared to have undergone hydropic degeneration, and the contents have become cystic, or semi-solid. The largest one is situated along the right side of the uterus and is very soft and cystic. Both tubes are dilated at their distal extremities to about the size of eggs and are buried in these adhesions. The surface of the uterus is likewise buried in firm dense adhesions. To the right tube is attached the appendix which measures about 4 centimeters in length, about ½ centimeter in diameter and is likewise buried in dense adhesions. The peritoneal surface is thickened and the vessels are somewhat injected. The uterine muscle is of variable thickness, two or three centimeters, due to the presence of fibroid nodules. The endometrium overlying several submucous fibroids is soft, thickened and edematous and appears to be very vascular.

Pathological Report.—Myosarcoma. Hyalin and custic ovary. Degeneration leio-myoma. Old abscess of tube; hydro-salpinx; chronic ovaritis; tube-ovarian abscess filled with caseous material. Dilated appendix.

CASE XVIII. No. 6084. Age 48. Present trouble: Patient comes to Hospital because of pain and soreness in lower quadrant, especially the right; she also has urinary difficulties. Troubles began indefinitely; has not felt well for past eight years; began to feel worse in December, weak and short of breath at times, last May had an attack of pain

in right lower quadrant lasting two to three days, apparently not related to periods at that time; was suddenly taken with an attack of inability to empty bladder; has begun to flow more frequently; has gained five pounds in weight.

Operation.—Supravaginal hysterectomy. Bilateral salpingo-oophorectomy. Appendectomy. Date Nov. 20, 1914.

Source of Material.—Uterus, tubes, ovaries and appendix; uterus was enlarged and completely retroflexed, contained multiple fibroid nodules, the largest which was on the posterior surface and almost completely filling the right lower pelvis. Large nodule measured 7 x 8 x 6.5 centimeters, solid throughout; no degenerating cavities. The uterus together with the fibroid nodules measured 2 x 2.5 x ½ centimeter, somewhat enlarged, few small cystic follicles. Appendix measures 4 x 1½ centimeters and surrounded by abundance of fat in meso-appendix. Appendix was patulous throughout, no constrictions or concretions.

Pathological Report.—Appendix negative; very cellular myoma with myo-sarcomatous change.

It is the general opinion that sarcomatous change occurring in any fibroma is the most common type of sarcoma found in the parenchymatous portion of the uterus. This appears to be borne out in the eighteen cases just cited. The usual theories advanced to explain the origin of the growths are:

1. By proliferation of the intermuscular connective tissue.

2. By proliferation of the connective tissue of the vessel walls.

3. By direct changes in the nonstriated muscle cells.

Which of these three occurs most commonly is hard to determine as often the cases are too advanced to trace the histogenesis. Some observers prefer to class that type originating from the muscle fibres (division 3) as a separate and distinct type, the change being due to a proliferation rather than a degeneration of the muscle cells. When the changes first occur the malignancy is, of course, limited to the original tumor, but as it gradually enlarges, expanding the original growth, it ultimately forms metastases through the lymph and blood channels and is quickly carried to all parts of the body. Thus we see how easy it is for those points to escape us. Only a careful, systematic microscopical examination of all the fibroid tumors removed will show the true state of affairs. Too often the tumors are not even incised and inspected even macroscopically, it being taken for granted the condition was nothing more than a simple fibroid. It is only in the early stages we can hope to effect a cure before the formation of metastases; before the degenerating area has approached the capsule of the tumor.

What is the exciting factor which brings about this change we ask. There seems as yet to be no certain answer any more than what causes malignancy in any other portion of the body. Age is no certain factor as we have shown one case of an unmarried young woman of 21 years; nor can repeated childbirth be advanced as the exciting factor. Granted we have not yet been able to ascertain the exact cause of the malignant change we may consider the next method of making an early diagnosis by making a careful study of the symptoms. The whole matter appears to come down to one fact, namely, we may not yet have been able to determine why the fibroid should occur in the first place, nor are there any set or sets of symptoms which are characteristic of beginning malignancy in the growth; consequently we can only make a plea for early attention to all fibroids in young or old. Whether they have passed the climacteric or not makes no difference. It is my opinion that the apparent scarcity of cases reported is due to the fact that the removed tumors are not often carefully examined for evidences of change. We are apt to be too well content with the getting it out to give the malignant phase a second thought. It is interesting to note that in two of the cases reported—young women—they had recovered from their primary operation and had gone to their homes. Because of the systematic careful examination of all tissue removed in the clinic, the malignant condition was discovered and the patients summoned to return for a more radical operation. One of these lived three years after the second operation. The other was feeling fine for several months following. She changed residence and track of her was lost.

In going over the ages in this series we find

3 from 21-30 years
3 from 31-40 years
9 from 41-50 years
2 from 51-70 years

The greatest frequency would seem to occur between the ages of 40 and 50 years.

In 500 cases of fibroid tumors where only the grossly suspicious areas were examined, Winter (2) found sarcoma present in 3.2 per cent. Again in 253 cases of fibroid tumors where a systematic microscopical search was made of all parts of the various tumors sarcoma was found in 4.3 per cent.

Kelly (3) found sarcomatous changes in 1.4 per cent. in 2,274 cases of fibroids.

In this series I have been unable to work out the percentage as I was unable to determine what proportion of the 6,084 cases covered were fibroid.

The possibility of mistaking a primary sarcoma for degenerative changes in fibroids has been borne in mind in this series. Three cases which were of a doubtful nature were not included, one from a young girl of 16 years; a large round celled alveolar sarcoma. Another being diagnosed from profuse curettings made accurate establishment of origin in a fibroid impossible. A third was an adeno sarcoma—probably congenital.

Tracy (4) reports sarcomatous changes in fifty-four cases out of 3,561 cases collected from various observers—1.5 per cent.

In conclusion the following points may be noted:

1. Sarcomatous degeneration of any fibroma is the most frequent type of sarcoma of the uterine body wall.
2. The frequency of occurrence varies from 1.5 per cent. to 4.3 per cent. of all uterine fibroid growths.
3. Considering the frequency of occurrence of fibroids a systematic microscopical search of the tumors removed will show a higher percentage of occurrence.
4. The mortality rate may be diminished if early operation is advised in all cases.
5. Surgical removal the only treatment safely employed.

BIBLIOGRAPHY.

1. Kelly & Noble, Vol. I; page 151.
2. Winter. *Zeitschript f. Geburtsch. u. Gynakal.* Bd. LVII, H. 1, 1906.
3. Kelly & Noble Vol. 1, page 669.
4. Tracy, S. E. *Surgery, Gynecology & Obstetrics.* Vol. 6, No. 3, page 246.

EMPYEMA OF THE MAXILLARY SINUS OR ANTRUM.*

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The great progress made in the diagnosis and treatment of antral disease in the past twenty years has been remarkable, but more especially so in the last decade.

There are thousands of cases in every large city which fail of diagnosis until the disease has caused systemic disturbance. How frequently we hear patients say that they have undergone treatment for catarrh for several years and are not cured; in many cases the maxillary antrum is the causative factor. Often we find persons suffering from the ill-effects of pus absorption until they have lost appetite and weight and are unable to follow their usual vocations.

ACUTE ANTRAL EMPYEMA.

In this condition we generally have a sense of fullness on the affected side, pain usually quite severe due to pressure and irritation to the nerves—generally a unilateral discharge and a dripping of the purulent secretion into the pharynx.

CHRONIC ANTRAL EMPYEMA.

Pain is not so marked as in acute cases. Tenderness to external pressure over the affected antrum, also in the region of the supra and infra orbital foramen, together with frontal and occiptal headaches and occasionally bulging of the external wall. Frequently a purulent discharge from the nose and naso pharynx. Patients frequently show symptoms of intoxication, loss of weight, anorexia, gastro-intestinal disturbance, insomnia, fetid breath, bad complexion, in fact they may present all the symptoms of a marked intoxication.

DIAGNOSIS.

Transillumination is one of the best methods of diagnosis but every means should be used for this purpose. The X-ray is valuable as it will often determine the condition at the apices of the teeth and the relative condition of the bone, also as to whether there are defective root fillings or putrescent pulps in teeth, and the presence of foreign bodies in the antrum, such as misplaced teeth, etc.

The X-ray should not always be relied on in these cases, as a false interpretation is sometimes made. By using the several methods there will be little likelihood of error.

A purulent discharge from the nose should always be cause of suspicion of antral disease, together with nausea, droppings of secretions in the post nasal region, frequently bad complexion, and a tendency to melancholy.

TEETH.

In all suspected cases of antral disease, the teeth should be given a very careful examination. It must be borne in mind that any tooth in the upper jaw when infected, may be a causative factor in antral disease. As a rule, however, the molars and biscuspids are the most frequent offenders; next the cuspids and then the laterals and centrals. The latter

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two, when diseased at the apices by abscesses, may in turn cause necrosis of the palatal antral wall. When infected in the latter case, the palate should not be opened except for immediate drainage and allowed to heal after pus has escaped. By amputation of the roots of the affected teeth, you will be able to use a curette or burr and remove all diseased tissue without making an opening into the palate. When a large incision is made in the palate and a part of the bone removed, the palate heals in an irregular manner and the topography of it is changed in a marked degree. The greater part of the palatal bone can be removed without a wound in the roof of the palate. In cases where there is a devastation of tissue, as in syphilis, of course there is an exception to the rule.

Ballenger states that the maxillary sinus is perhaps more often affected than any of the other sinuses, because in about one-half of the cases it is infected from the teeth.

Bier, of Berlin, quotes Brophy as saying that at least 85 per cent. of the antral cases are caused by the teeth. Of the twenty-eight cases that he himself treated, twenty-five started primarily in the teeth, while the other three developed secondarily to primary involvement of the frontal sinus.

McCurdy quotes Dimochowski, who, after making one hundred and fifty autopsies, held that but few cases have dental origin. And Fletcher, who had examined five hundred skulls, in which two hundred and fifty-two were found to have abscesses of the upper molars, found only twelve molars perforating the floor of the antrum and states that he has never seen a case of dental origin.

J. P. F. in his report on inflammations of the maxillary sinus, with special reference to empyema, which was based on the study of one hundred unselected skulls, examined a few hours after death, in the Autopsy Room of the Vienna General Hospital, gives the following conclusions:

First—37 per cent. of the hundred heads showed some evidence of pathological changes in the maxillary antra.

Second—Of these thirty-seven cases, two were examples of edema. Twelve were examples of chronic inflammation or empyema. One was an example of an alveolar abscess of a dental cyst. Thirteen were examples of retention cysts.

Third—With one or two exceptions, all of these cases were undiagnosticated during life.

The presence of a large amount of pus in ten out of twelve of these cases of empyema, may have played an active part in causing the death of the patients.

Dr. Walter V. Brem, of Los Angeles, formerly of the Colon Hospital, Cristobal, Canal Zone, has given an account of the post-mortem examination of the accessory sinuses, while acting Pathologist of the Ancon Hospital.

The frontal, sphenoidal and maxillary sinuses were examined in about three hundred skulls of patients who died of various diseases. Of these, about one hundred and forty deaths were due to pneumococcus infections. All cases of pneumoncoccus meningitis showed purulent inflammation of one or more of the nasal accessory sinuses.

About 70 per cent. of pneumonia cases showed the same thing. Purulent involvement was not infrequently found in other cases and chronic and subacute inflammations in about 40 per cent. In approximately 14 per cent. of the non-pneumococcio deaths, pneumococci were present in one or more of the sinuses.

OPERATION.

There are various methods of operation—the Alveolar, Palatal, Denker, Caldwell-Luc, Sluder, Kuster and the Canfield-Ballenger methods, and others. The alveolar method is often done by extracting a tooth and then opening through the socket with a burr or drill. I do not care for this method as a rule, because it is often in this way that teeth are lost unnecessarily. Further, you cannot have the best access to the walls of the antrum, and in cases of polypi, it is almost impossible to remove them in that way without an extensive opening. Of course many antra have been cured just through drainage without a radical operation. Cases of over a year's standing are generally cases of antral polypi. If a thorough operation is not done, these cases are much like the poor—"They remain with us always."

The Denker, Sluder, Caldwell-Luc and Canfield-Ballenger operations are those which require the removal of the naso-antral wall. I fail to see the advantage in removing normal structures and then having them remain abnormal for the rest of the patient's life, when the same results can be obtained without any apparent loss of normal tissue. As my rhinological friends say that the opening in the wall is to obtain drainage, my contention is that you can get all the drainage that you need from the Kuster method.

Nature did not intend that there should be a vast devastation of the naso-approximal wall, but instead, she placed the opening ostium high

up, where there would be little danger from infection. The rhinologist further contends that the oral method, is more likely to cause infection, than by the nasal route. I do not agree on that point.

Before the operation is done, the mouth should be put in as hygienic condition as possible. If oral infections involve the antrum, it is because the operator did not know the importance of oral prophylaxis or was careless, which is worse.

I have never heard the rhinologist dwell very long on the possibilities of infection from the nose, even when the opening into the antrum or the naso antral wall was almost wholly removed. In operations of this kind, you are getting as far away from the normal anatomical structure as is possible. I further maintain that the nasal route will some day be abandoned as not necessary, except in cases of acute infection, following coryza, etc.

THE KUSTER OPERATION.

In performing this operation, the anterior wall of the antrum is opened in the canine fossa. The opening should be large enough to permit the introduction of the index finger. By this method, one is able to detect any dead bone, septa or any other abnormality that may exist. A small electric light may be inserted for ocular examination. If the ostium be occluded, it can often be dilated, at the same time giving the operator plenty of space in which to work. I prefer this operation in the majority of cases.

Antral operations, at times, must be done by other methods. In cases where the bone is diseased at the antral floor, it is imperative that it be removed. If a large portion of the bone is removed, it is well to make an appliance to fit over the wound, in order to exclude food and mouth flora. An examination can readily be made in a few minutes after the bone is removed and the antrum curetted and syringed out with a warm saturated solution of boric acid. The antrum is then dried and an application of tincture of iodine combined with oil of petrogen is made to all parts of the antrum. The cavity is then packed with iodoform gauze for forty-eight hours and another application of the above is made and left for another forty-eight hours. Four or five dressings at intervals of forty-eight hours is usually sufficient. Each succeeding dressing is made smaller so as not to interfere with the granulations of the antral mucosa.

About 96 per cent. of the antral operations done by the writer, are done under local anesthesia, cocaine 1 per cent., chloretone, 6/10 of 1 per cent., together with witchhazel and boric acid. Occasionally oxygen and nitrous oxide gas anesthesia are used.

Nearly all my operations are supplemented by chloretone, by mouth, grains 15 or 20, one hour before operation, and followed by hot tea, coffee or milk. In many cases I prefer coffee for in its use we get two and a half or three grains of caffeine which is a true heart stimulant. Chloretone acts on the nerve terminals and the results obtained are satisfactory.

The opening into the antrum should be as symmetrical as possible in order to facilitate the packing with as little pain as possible.

The floor of the orbit should be carefully examined and care exercised not to use force when working in that region.

Failures often result when septi exist in the antra and are not discovered and the pus and polypi are confined behind a barrier. Nothing does quite as well as the finger in making examinations of this kind. Strong antiseptics and germicides should not be used as their irritating influences are injurious and retard granulation.

Careful count should be kept of the number of pieces of gauze used, as a piece of forgotten gauze left in the antrum, has been the cause of a second operation. This together with pieces of rubber or metal tubing or an antral plug have been the cause of irritation and suppuration and the source not discovered until a radiograph was secured.

TREATMENT.

Force should not be used in syringing the antrum unless the opening is large so that the solution can readily escape. Much harm has been done in the past by the use of hydrogen peroxide in antral treatment, especially where the antral wound is small. The peroxide coming in contact with blood and pus, immediately effervesces and through lack of exit is forced (carrying infection naturally with it) to the opposite antrum, or into some of the adjacent sinuses and secondary infection is likely to occur. It is my belief that it should not be used, as cases do better without it. In cases where the periosteum is raised from the bone the peroxide may cause further trouble by carrying the infection beneath the periosteum.

Irrigations of saturated solutions of warm boric acid, or a warm physiological salt solution are the best agents for general use. Certain conditions may arise which call for special mod-

ification, but a mild antiseptic irrigation in my opinion, is the best method to employ.

HISTORY.

Mr. S. Age 23; was treated for antral empyema combined with necrosis. The patient and his mother called on me about eleven months ago for an examination, as there was pus present on the gums. The mother stated that he had not enjoyed good health since he was 12 years old. That he was unable to work; that he always had some slight fever; had a poor appetite and did not take much interest in things about him. He had been examined repeatedly for tuberculosis but could find no tubercle, in the sputum, neither could a lesion be found in the lungs. He was backward and shy and talked little. An examination of the teeth showed that the first molar roots were only partially filled and gave a history of an abscess about the teeth previous to being filled.

Transillumination readily showed the antrum to be diseased. An X-ray showed that a portion of the external antral wall appeared to be diseased but too much credence could not be put on this. A radical operation was done, the three molars and bicuspids were removed together with the antral floor, and a good portion of the external wall, all diseased tissues were removed. Polypi and pus were present, together with necrosis. The infection was streptococci, staphylococci and pneumococci. This operation caused a large wound which was packed every forty-eight hours for ten days, at which time an impression of the orifice of the wound and adjacent parts was taken and an appliance fitted over the cavity to protect it from lodgments of food.

Three weeks after the operation the patient had a craving for food and in a short time was eating seven or eight times a day. The great consumption of food began to tell, he gained rapidly in weight and wanted to go to work and earn money. He began to talk about things in general, something unusual for him. His facial expression changed; he had a happy manner and his color improved, and his endurance became much greater.

As above stated, this was a large wound and would require considerable time to fill in. The value of the antral appliance in excluding food is equalled by its value as an aid in articulate speech, otherwise the voice is strongly nasal. An impression should never be taken without having the antrum nearly filled with gauze, in order to prevent much of an undercut, otherwise when the wax or compound becomes hard, after a dash of ice water, it cannot be removed without much pain and in some cases this is very distressing. These remarks also apply to Plaster of Paris.

A few months ago he went to work for a real estate firm. He is making money and has a handshake that goes with the business that is well worth having.

CASE No. 2. Miss C., age 30; had complained of pain in the right temporal region for about eighteen years and in fact it had been nearly constant of late years, except when she was under the influence of opiates. An X-ray showed that all the upper anterior teeth were affected at their apices. Amputation of the roots of all the anterior teeth was attempted but diseased bone was found, which extended from the right to the left cuspid, also extending posteriorly into the palate. The six anterior teeth were extracted and all the necrotic bone removed, which extended from above the teeth nearly into the nose and a considerable portion of the palate.

The antrum was involved and an operation via the cuspid fossa done; during the operation it was found that the supporting structures of the right bicuspid teeth were necrotic and they were also removed. The culture proved to be a pure pneumococcus. An autogenous vaccine was made and an injection of 200,000,000 was given every fifth day until seven injections were given. The case went on to resolution and the patient returned home after six weeks fully recovered. I hesistated to extract her teeth as she was young and possessed a rare musical voice which she used more or less in public. There was no alternative but to lose the teeth.

CASE No. 3. Mr. B., age 50: occupation, book agent. Had been in ill health for about seventeen years; his true condition was not discovered until he had an acute attack of chronic antral empyema. His right cheek was distended and he had considerable pain. He had several attacks of intestinal hemorrhage which reduced his vitality to a marked degree, also had stomach trouble, so that he had not had a well day in many years. His physician examined his urine and found that he had albumen and casts present which continued to persist. He gave a clear history of having had abscesses about his teeth twenty years previous.

A visual examination showed that he had a marked case of necrosis. On account of his kidney lesion, I deemed it best to use nitrous oxide and remove all teeth and diseased bone in that part of the jaw. After three attempts, the operation was completed. His progress was slow, tonics were prescribed with nutritious diet. The shock was severe but in the course of two months he showed some improvement; was able to be about and to come to the office for treatment. He returned to his office and continued to improve slowly until February when he was again stricken with intestinal hemorrhage and lived but a short time after. His kidney lesion and death were no doubt due to absorption of toxic products of an antral empyema.

CASE No. 4. Miss Z, age 31; had complained of pain in the left side of the face, the second molar being tender on percussion, the first molar being absent. The region over the lachrymal duct was tender on pressure and she had occipital and frontal pains which extended along the lower eyelid toward the malar bone. The right antrum was infected by extension from the left. She had been operated on six years previously.

The gum was swabbed with tincture of iodine and a small sharp steel probe was inserted a short distance beneath the gum which revealed the fact that the bone was affected. The second molar was extracted and diseased bone removed and the antrum drained. Before the operation the patient complained of a bad odor after blowing her nose. Before coming to me she had been treated by her oculist for a year with several changes of lenses. After securing drainage she could not see well with the left eye and could not use her glasses. The

right antrum was also found to be infected from the opposite side. When perfect drainage of both antra was secured she was able to follow her vocation, that of needle work, without glasses. Later it was found necessary for her to use only weak lenses.

CONCLUSION.

I wish to make a plea to the medical and dental professions for the earlier diagnosis and treatment of these conditions, thereby saving our patients many months of suffering. By this means, many lives would no doubt be prolonged, for the writer believes that frequently deaths result directly or indirectly from chronic infection of the antrum and its secondary conditions.

A CONSIDERATION OF RECENT METHODS OF TRANSFUSION WITH INDICATIONS AND TECHNIC.

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Within recent years blood transfusion has become a rather common procedure owing to improvements in technic. The methods formerly used were difficult and required definite surgical skill as in the vessel anastomosis method of Carrel, the use of canulas as devised by Crile and Elsberg or the jugular vein method of Soresi. A great objection to these methods was the difficulty in determining the exact amount of blood transfused. The Kimpton-Brown[1] paraffinized tubes are also used with success. The technic is somewhat difficult and always necessitates a dissection of the veins of the donor and the recipient. The syringe method of Lindeman must also be mentioned inasmuch as it was a forerunner of the method largely used by us. In this method about twelve Record syringes are employed, being constantly filled with blood (20 c.c.) taken from the donor's vein and then injected into the recipient. Numerous trained assistants are necessary and the blood often clots in the syringes.

Before the Michigan State Medical Society some years ago, one of us described an apparatus for transfusing whole blood and cited cases in which this apparatus was successfully used.

We propose to describe two methods which have recently come into use. These methods are more exact and more easily accomplished than all others; namely, sodium citrate and the Unger methods.

The first or sodium citrate method was devised by Dr. Richard Lewisohn[2] of New York City, and consists in the withdrawal of blood from the donor under strict asepsis and the admixture of sterile sodium citrate 2 per cent. strength. This prevents clotting of the blood so it may be thus introduced into the vein of the recipient. Ten cubic centimeters of 2 per cent. sodium citrate are added to each 100 cubic centimeters of blood used so that the blood contains citrate in .2 per cent. strength. Care should be taken that the citrate concentration does not exceed this figure.

The next method employed, the one which we have considered better for transfusing whole blood, is that of Lester A. Unger[3] [4] of New York. This apparatus is essentially a double stop cock by means of which blood may be aspirated from the vein of the donor and injected into the recipient. Two syringes are necessary in this apparatus, one, a Record for aspiration and injection of the blood, while a Luer is used for flushing the system with saline to prevent clotting of the blood.

The advantages of these methods are obvious; they may be done rapidly, the technic is simple and can be easily acquired; one can tell accurately the amount of blood transfused. Thorough and complete asepsis is readily established as the Unger apparatus may be taken completely apart for sterilization.

Following transfusion by the citrate method, reactions usually occur. These reactions consist in a rise of temperature of two or two and one-half degrees which is of no moment. Indeed, one of us has seen marked improvement in a case following such a reaction. Reactions are rare with the Unger method. The cause of these reactions has been explained by various theories as (a) antigen-antibody combinations; (b) increased trypsin and anti-trypsin content of the blood; (c) the formation of a new protein in the blood.

The amount of blood transfused varies with the age of the patient, and the indication; 60-70 cubic centimeters for an infant, 400 to 800 for an adult. The average transfusion for an adult is about 500 cubic centimeters; excessive amounts should not be used owing to certain dangers which consist in pulmonary edema and cardiac dilatation.

1. Mason: Surg., Gyn. and Obs. Vol. 20, 1915, Page 73.
2. Surg., Gyn. and Obs. Vol. 21, 1915. Page 37.
3. Lester Unger, Jour. A.M.A., Feb. 13, 1915.
4. Lester Unger, Jour. A.M.A., Sept. 18, 1915.

The indications for transfusion are best outlined in the admirable paper by Ottenberg and Libman.[5]

A. Transfusion for simple hemorrhage in:—
   1. Gastric and Duodenal Ulcer.
   2. Dysentery.
   3. Typhoid hemorrhage.
   4. Ectopic pregnancy.

B. Transfusion connected with Surgical Operations.
   1. Preliminary to operations.
   2. Post operative hemorrhages.
   3. Shock.

C. Transfusion for cure of hemorrhagic disease.
   1. Purpura hemorrhagica.
   2. Hemophylia.
   3. Hemorrhage secondary to blood disease, as severe infections—jaundice (cholemia).

D. Transfusion for blood diseases.
   1. Pernicious anemia.
   2. Leukemia.

E. Transfusion for infection.
   1. Infection by pyogenic organisms.
   2. Sub-acute streptococcic endocarditis.

F. Transfusion for intoxications.
   1. Acute gas-poisoning, carbon monoxide, benzol.
   2. Diabetic coma.

G. Transfusion for debilitating conditions.
   1. Cancer.
   2. Malnutrition.
   3. Simple anemia.

Of the indications mentioned, we wish to emphasize the importance of transfusion in bleeding gastric or duodenal ulcers, typhoid hemorrhage and ectopic gestation. In these cases it is absolutely life-saving and should always be considered. Preliminary to operation upon jaundiced patients or where there has been prolonged bleeding as in uterine fibroids or hypernephromata, transfusion is of great benefit. It lessens the operator's risk and hastens convalescence.

Transfusion is a very useful measure in hemophylia in that it tends to shorten the prolonged coagulation time and replaces lost blood. Purpura cases are often helped. Pernicious anemia is best treated by transfusion as a remissive stage is frequently brought about, patients feel stronger, the appetite is increased and the blood picture is greatly improved. Repeated transfusions are often necessary. The chronic forms of leukemia are assisted materially; at this point we wish to speak against transfusion in acute leukemia as the condition is usually made worse and death speedily follows. Sepsis cases are frequently saved, especially the staphylococcus type. Illuminating gas and benzol poisoning are aided materially by transfusion when preceded by a venesection. Secondary anemia is always helped, while hemorrhagic disease in the new born is cured by a small transfusion. Cherry[6] and Langrock have shown that mother's blood may be used in the new born without the preliminary tests as there is no danger. Transfusion has been done with limited success in diabetic coma.

It is of utmost importance that preliminary agglutination and hemolysis tests be done carefully with the blood of the donor and recipient before transfusion is performed as serious difficulties may result. In great emergencies one may use a parent, or a brother or sister without doing the tests but even this is sometimes dangerous. The untoward results where the tests have not been made consist in hematuria, development of jaundice, pulmonary edema, urticaria, petecheal eruptions, phagocytosis of the transfused red blood cells by the recipient's leukocytes, convulsions and sudden death. It is, of course, important that a Wassermann reaction be made on all donors.

We wish to present a brief summary of all cases recently transfused.

1. Mrs. B. Diagnosis, Pernicious Anemia.

An Unger transfusion of 425 C. C. was done. Following the transfusion this patient felt stronger, her appetite improved and the patient walked about. This case is complicated by a pyonephrosis and will be operated. The transfusion has seemed to improve her general condition preparatory to operation. Her blood count prior to transfusion was, Hemoglobin, 40 per cent.; red cells, 1.400.000. One month later the count was practically unchanged but as stated previously, she is improved generally, which is of great importance. She will receive another transfusion before operation.

2. Mr. L. Diagnosis, Hypernephroma of Kidney.

This patient was transfused by the Unger method immediately after operation as he had lost considerable blood during the operation. His pulse immediately improved, he made a rapid post-operative recovery and his convalescence has been hastened materially. A blood count was not made immediately before this transfusion. The blood count at present is, Red blood cells 3,700,000, Hemoglobin 70 per cent. The amount of blood transfused in this case was 450 c. c.

3. Miss S. Diagnosis, Bleeding Gastric Ulcer.

This patient had repeated attacks of hematemesis, and was greatly emaciated. She could retain no food by mouth. 360 c. c. of blood was given by the Unger method. She now feels stronger, retains food by mouth and will soon be in condition to withstand an operation for cure of her condition. We wish to thank Dr. Naylor for permission to publish this case.

5. Ottenberg & Libman, Jour. Med. Sci., 1915. Vol. 150, P. 40-41.

6. Cherry & Langrock, Jour. A.M.A., Feb. 26, 1916, P. 626.

4. Mrs. L. Diagnosis, Sepsis of Puerperal Origin. Courtesy of Dr. G. E. McKean.

This patient has a sepsis caused by the streptococcus hemolyticus. She received 400 c. c. of blood by the Unger method. Her blood count before transfusion was; Hemoglobin 35 per cent. Red cells 2,500,000. After transfusion, Hemoglobin, 50 per cent; red cells, 3,900,000.

5. Mr. K. Diagnosis, Pernicious Anemia. Third relapse.

This patient had great weakness with dyspnea; he was quite edematous also. A citrate transfusion of 280 c. c. was done. The blood count prior to transfusion was Hemoglobin 25 per cent. Red blood cells, 1,100,000. Three days after transfusion the red blood cells, 2,200,000. Hemoglobin, 35 per cent. Since then the patient has steadily improved. His last Hemoglobin was 50 per cent.

6. Mrs. K. Diagnosis, Pernicious Anemia. Second relapse.

This patient presented the usual picture of pernicious anemia with marked pallor, weakness and anorexia. There was severe dyspnea, and the pulse was 120. Following a citrate transfusion of 250 c. c. she steadily improved, her strength and appetite returned and she is now up and about. This patient had a severe reaction after transfusion. Before transfusion the blood count was, Hemoglobin 22 per cent. Red cells, 1,740,000. After transfusion, Hemoglobin, 50 per cent. Red cells, 2,600,000.

7. Mrs. P. Diagnosis, Puerperal Sepsis.

Following the delivery of a dead foetus this patient presented the clinical picture of sepsis, with daily fever and chills. Pelvic examination by Dr. Cullen was negative. The blood count before transfusion was Hemoglobin, 30 per cent, red cells 1,800,000.: A citrate transfusion of 380 c. c. was done and was followed by a terrific reaction; the temperature rose to 106.8 degrees. Following this, the temperature declined and did not rise above 100 degrees. The patient was sent home in excellent condition, the blood count then being: Hemoglobin, 50 per cent., red cells, 2,700,00. Later the Hemoglobin rose to 80 per cent.

8. Mrs. T. Diagnosis, Puerperal Sepsis following instrumental labor of a healthy child. In addition this patient had a pleural effusion (left). The patient was in a very weakened condition and 380 c. c. of whole blood were transfused by the Freund apparatus. The condition greatly improved and was followed by complete recovery. Blood count before transfusion Hemoglobin, 50 per cent., red cells, 3,200,000. Blood count after transfusion, Hemoglobin 70 per cent., red cells, 3,900,000.

9. Child, aged three years. Diagnosis, Acute Lymphatic Leukemia.

The patient was seen in consultation with Doctors Rowland and Hoobler, 90 c. c. of blood were transfused by the Freund apparatus. Counts before and after transfusion showed no improvement.

10. Child, aged eight years. Diagnosis Aplastic Anemia.

This patient was practically moribund and 280 c. c. of whole blood were transfused by the Freund apparatus. The blood counts showed an improvement but the child continued to bleed from all mucous membranes and death followed. Blood count before transfusion, Hemoglobin 10 per cent. Red cells, 820,000. After transfusion, Hemoglobin 45 per cent. Red cells, 2,750,000.

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A SUMMARY OF RECENT PROGRESS IN THE TREATMENT OF CARCINOMA OF THE UTERINE CERVIX.*

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In the discussion of this subject, not more than four methods of procedure are worthy of consideration, viz; (1) Radical hysterectomy, (2) The cautery method of treatment, (3) Roentgentherapy, (4) Radiumtherapy.

Vaginal operations for cancer of the uterine cervix have largely been abandoned. Even those enthusiastic European operators, who formerly elected the vaginal route, have now, with one notable exception, namely, Schauta, given up the vaginal method of procedure.

RADICAL ABDOMINAL HYSTERECTOMY.

Freund (1), in 1878, performed the first abdominal hysterectomy for cancer of the uterus. Ries (2), in March, 1895, first described the radical abdominal operation with removal of the pelvic glands. John G. Clark (3), in April, 1895, described a similar operation, and reported a case. Rumpf, of Berlin, in June, 1895, reported an operation in which he had used the radical technic described by Ries and Clark.

Mackenrodt (4), as early as 1894, urged the wide excision of the parametria; Ries, in 1895, suggested the removal of the pelvic glands; Stimson (5), in 1889, had advocated a method of isolating and tying separately the uterine arteries; Bardenhaur (6), in 1881 had suggested the advantage of pelvic drainage. Wertheim (7) perfected the technic advocated by Ries and Clark, and adopted this technic in all of his work. He reported five hundred cases, with an analysis of two hundred and fifty operated, in which the radical abdominal procedure had been done five or more years previously. His results were as follows: sixty-three deaths from operation, seventy-eight recurrences, and one hundred and six recoveries, 42 per cent. of five-year cures. Five-year cures of other foreign operators vary from 42 per cent. of Von Rosthorn to 60 per cent. of Polossus. The im-

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mediate mortality in foreign clinics varies from 12 to 25 per cent. In Freund's and Trendelenberg's time, the period from 1878 to 1890, two-thirds of the cases operated died from sepsis or peritonitis.

Considerable controversy has arisen regarding the advisability of removal of the pelvic glands. Dr. John G. Clark (8), one of the originators of the radical method, stated in a recent publication, "We have long since abandoned the extensive dissection of lymph glands, and from personal observation of cases coming under my care I reached the conclusion, five years ago, that when the deeper iliac glands are the seat of metastases, we are merely fighting wind-mills, so to speak, in the attempt to cure these patients. Since that time it has been my controlling policy merely to remove one or two glands for microscopic examination. When a radical operation has been performed, and these glands are demonstrated to be free from cancer, the prognosis is favorable. Conversely, if metastases are found, no hope of ultimate cure can be held out." Wertheim (7) states that in forty-one of his cases in which carcinomatous glands were removed, only five were living at the end of five years. Bumm's (9) statistics are very similar. Of forty-two cases in whom carcinomatous glands were removed, three only were living after five years. Statistics of various other surgeons are in accord with these. So it appears best not to remove to any extent, at least, involved pelvic lymphatic glands. When hysterectomy may be performed without the extensive removal of pelvic lymphatic glands, the margin of safety to the patient is increased and the operation simplified.

Of all measures for the cure of cervical cancer, the radical abdominal hysterectomy is the only procedure that has stood the test of time, and today is the only method of treatment by which a five year freedom from recurrence may with any degree of assurance be expected.

THE CAUTERY TREATMENT.

Byrne (10), of Brooklyn, was one of the pioneers in the treatment of carcinoma of the uterus with the electric cautery. He reported three hundred and sixty-seven cases, with 19 per cent. living after five years, and this without any selection of cases whatsoever. Byrne emphasized the need of thorough cauterization, and of additional cauterization as often as necessary. He maintained that when cancer recurred, it practically never did so at the point cauterized. Carl Braun, of Vienna, was also quite successful with the cautery. He stated, "We lack interest in these inoperable cases because we consider them doomed from the outset, and consider our duty fully performed by giving them the benefit of one thorough cauterization. We should watch them carefully, examine them frequently, cauterize them often, and we might occasionally see a cure." The cautery method of treatment for cancer of the cervix uteri has been used by many other gynecologists, especially Percy (11), of Galesburg, Illinois, who perfected the technic to such an extent as to make its application simple and practical. By this method, cancer cells are destroyed by heat, which is regulated at a low temperature, and applied by a special method. Percy's theory is that cancer cells are destroyed by a low degree of heat, while at the same time, normal tissues are not especially affected. This method, as applied by Clark (12), of New Orleans, has converted a number of advanced cases to the operable. Clark states, that in certain of his cases, after repeated applications of the heat, the uterus became movable, the infiltration of the broad ligaments passed away, and as operative risks these cases were transformed to such a degree that Wertheim removal was made possible.

RADIUM.

Considerable disagreement exists today in the profession as to the value of radium in the treatment of uterine cancer. There was a period, about three years ago, in which a wave of enthusiasm passed over Germany, Austria, France and England as to the therapeutic possibilities of radium in the treatment of cancer. Wertheim (13) stated early in 1915, "When I was lecturing in the fall of 1914, on 'The Radium Treatment of Carcinoma,' I found out how hard it was even to try to say anything against the radium treatment. Such an enthusiasm prevailed, that anyone who dared to express distrust of radium had to expect to be criticized quite harshly."

The profession is now adopting more rational, and less confident views. Operators have found that, even with careful filtering, it is impossible to control, absolutely, the action of the radium. It is well known that radium attacks normal tissues as well as cancerous tissues, although, perhaps, not in the same degree, and many observers remark that in some instances the destruction of tissues subjected to radium had progressed so far that large sloughs into the bladder and into the rectum resulted. It has also been discovered that the effect of ra-

dium is not permanent, and that repeated treatments in many cases are necessary. Wertheim has used radium to a considerable extent, and he states that he made a trial of its use in fourteen cases, where operation was possible, and that after using the radium by the most approved methods, and allowing sufficient time for a radium cure to take place in each instance, he subjected all of these cases to hysterectomy. In twelve of the fourteen, caricnoma was found. He remarks that in some specimens the cancer cells were in an "affected condition," and that only in two instances was it possible to pass the excised uteri as free from carcinoma. He states further, "I have also directed attention to the unfavorable influence on the health in general of large doses of radium, and have shown that serious local injuries have been caused by them." And again, "In some cases we obtained surprising results. Generally speaking, however, our results have been unsatisfactory." Not considering the cases that were refractory to radium, the results obtained in other instances were only temporary. Some cases in which there were relapses after the operation, were treated again with radium rays, and these showed that in our early good results, the resistance had disappeared and an extraordinary softness of the formerly hard tissues was noticeable but a few months afterwards; and further large, newly affected masses appeared, and some deaths resulted.

Victor Bonney (14) states:

"From a considerable experience with the use of radium, my conclusions are that, in many cases, radium produces a remarkable improvement or even apparent disappearance of the growth. This improvement or disappearance is rarely of long duration. In most of the patients the growth breaks out again. I have seen no case in which, on a three years' freedom from recurrence basis, a cure could be claimed."

Flatau (15), of Nuernburg, is one of the most enthusiastic exponents of the radium treatment. I quote from his paper:

"I came to the conclusion, after using radium for one and one-half years, that cancer, in its beginning, is entirely destroyed by radium. I, personally, have not resorted to a radical operation for carcinoma of the cervix uteri since December, 1913. Without trying to be hasty in my conclusions, I can assert that the number of those who are still enjoying a healthy life is certainly larger than had I resorted to radical abdominal operation. At the same time, with the same number of cases, my average mortality following the use of radium has been 12 per cent. If radium is able to heal a large focus of ichorous suppuration in advanced cases, so that by a later investigation, proof can be found that this was the site of the destructive disease, then, we should come to the conclusion that the cure of cancer is not only possible, but sure. The inauguration of radium treatment has given to the gynecologist an entirely new method of fighting carcinoma."

Another report that runs along similar lines is that of Exner (16). Exner, for ten years, has used radium in the treatment of malignant growths, getting splendid results in the few superficial, but very unsatisfactory ones in the more extensively involved, cases. In forty cases so treated, two were apparently cured, and remained so from seven to nine years, when recurrences developed and one ended fatally. He believes, however, that the lives of all patients were prolonged, and that the majority were rendered more comfortable, but he does not aver that a cure was effected in a single instance. Cheron and Duval (17) reported at The International Medical Conference, held in London in 1914, the results of one hundred and fifty cases of uterine and vaginal carcinoma treated with radium during the previous five years. These writers believe that the unfavorable results reported in the literature were due to faulty technic. They laid particular stress upon the efficiency of large doses well filtered. In their opinion, radium given in small doses ranging from ten to twenty milligrams is worse than useless, as the remedy actually stimulates the growth. Similar reports have been given out by The London Radium Institute. Kelly and Burnham (18) reported two hundred and thirteen cases of carcinoma of the cervix and vagina treated by radium. Of these, fourteen were operable and one hundred and ninety-nine inoperable. Of the fourteen operable cases, ten patients were operated upon and treated prophylactically with radium. Of these, two have been well for more than three years, one for more than two years and three for more than six months. This number is too small, and the elapsed time too short to draw any conclusions. Of the inoperable cases treated with radium, fifty-three have been clinically cured, but the authors do not state over how long a period of time their observations have extended. Of this number, one hundred and nine were remarkably improved and thirty-seven not improved, a percentage of approximately 30 per cent. on which radium had no effect. It is only fair to mention in this connection that these authors have not selected their cases, but have taken all that applied for treatment.

Schmitz (19), of Chicago, treated thirty-six cases and he asserts that advanced, inoper-

able or recurrent cancers are ordinarily refractory towards radium rays. He advises operation followed by radium treatment. Kelly (18) recommends radical operation in cases that are operable; in borderline and inoperable cases, radium treatment. Insufficient time has transpired since the introduction of radium-therapy, to form a definite opinion as to its value in the treatment of carcinoma of the cervix. Bumm (20) claims that the limit of penetration efficiency is only four centimeters, even when massive doses are used. Other radium experts, particularly Kelly and Burnham, maintain that it is possible to radiate almost any depth with proper disposal of the applicators.

ROENTGENTHERAPY IN THE TREATMENT OF CERVICAL CANCER.

Because of the great expense incident to the employment of radium, attempts have been made to obtain good results from roentgentherapy. There appears to be little difference in the effects of the two methods of treatment. As J. T. Case (21) states, "Study of histological specimens shows no essential difference between the biological effect produced by the roentgen rays and by the rays of radium and mesothorium." Haendly (22) made histo-pathological studies of cancer tissue from uteri which have been subjected to irradiation. Haendly states: "There is a primary injury of the cancer cells which leads to disturbance of their growth, lack of mitosis and giant cell formation; the character of the epithelial cells is changed; and finally there is a disappearance of some of the cells through complete destruction. One notes a tendency for connective tissue new growth to replace the destroyed carcinoma cells. Through over-dosage, this new-formed connective tissue may become sclerotic and degenerated, as does the rest of the connective tissue. The smooth muscle atrophies and disappears almost entirely. Some of the muscle fibers show hyaline degeneration." The destruction of cancer cells by roentgentherapy has been demonstrated histologically by other investigators. This fact must be conceded. Histological findings reported by Von Franque (23) in three of his own cases that underwent hysterectomy after roentgen treatment illustrated the different degrees of change which have been described by many authors. There seems little doubt that the Roentgen treatment will be more generally used, and with the improvement in the technic of X-ray administration should come a more general use of this treatment in cancerous growths. Perhaps the most complete report on this subject comes from the clinic of Professor Bumm, who has endeavored to perfect a method of treatment of cancer by the use of the X-ray. Bumm (24) believes that eventually the Roentgen treatment will prove a very efficient substitute for radium. Indeed, he is inclined to insist that roentgentherapy will supercede radium in the treatment of carcinoma. In his opinion, a technic will be evolved that will permit of a satisfactory treatment without resulting serious burns of normal tissue. He even makes the assertion that with the use of newer tubes it may be possible ultimately to radiate these cases without the necessity of employing the vaginal method. In order to prove his theory, he subjected six women suffering from advanced carcinoma of the cervix to irradiation solely from the abdomen or back, and in two of these cases the tumor disappeared completely within a few weeks. In all instances large fungoid, freely-bleeding masses completely filled the vaginal vault. Specimens of these tissues excised for microscopic examination revealed almost complete destruction of the carcinoma cells and only a few scattered degenerated remains could be found, and these were surrounded by dense masses of fibrous tissue. In only one instance were cancer cells demonstrated. Bumm believes from these experiments, that many deeply-seated growths hitherto regarded as unfavorable may offer a hope of cure by the use of the X-ray.

Kroenig (25), of Freiburg, formerly one of the most ardent advocates of mesothorium and radium, is now using the X-ray almost exclusively in the treatment of cancer of the uterus. His present technic consists in giving these patients what he terms a thirty-hour treatment. First of all the "dammerschlaf" is induced by the administration of narcophin and scopolamine, and while the patient is in "twilight," the thirty-hour treatment is given, and is watched over by a nurse who has been especially trained.

As is true with radium, massive doses of Roentgen rays appears to be indicated. Insufficient irradiation seems to stimulate the growth rather than cause cellular destruction. Kienboech (26) states that almost every carcinoma, whatever its kind or location, may be favorably improved by irradiation, but only a comparatively small portion of cases can be so greatly benefited as to be called clinically cured.

Cancer of the uterine cervix, like cancer in all other parts of the body, is susceptible to radical removal if diagnosed sufficiently early.

All ulcerations of the cervix in women past the age of 35 are potentially cancer, and should be treated by some radical method.

If we are to increase the number of cancer cures, it is absolutely necessary to get the cases sufficiently early that the entire cancer, with all avenues of extension, may be removed in the most radical manner. Other things being equal, the prognosis will depend upon; (1) early diagnosis, (2) the skill of the operator, (3) other methods used in conjunction with the operation, such as roentgentherapy and radiumtherapy. Statistics of the best operators have demonstrated that the radical abdominal operation offers the best results of all forms of treatment for uterine cancer. The inoperable cases may be treated either with the cautery, or with radium or roentgentherapy, or by some combination of these methods.

From references quoted, it is apparent that radium treatment will give a more or less definite percentage of successes and a more or less certain percentage of failures. According to many reports from many clinics, there seems little doubt that radium possesses considerable value and probably should be used in a large number of instances. Schauta (27) asserts, "I am of the opinion that radium treatment should be used wherever operation would be difficult and when women are too feeble or are afraid of operation." Burnham and Kelly (18) state, "We are convinced that radium is of exceedingly great value in the treatment of cancers of the cervix uteri and vagina." Similar opinions have been expressed regarding the value of roentgentherapy.

It would seem that with radium and the X-ray, we have valuable additions to our armamentarium for fighting cancer. These two remedies are still in their infancy; experts are learning more and more of their efficacy and methods of administration every day. No large series of cases observed over a five-year period of time has as yet been reported, upon which judgment may be based, but radium and X-ray therapy of cancer are, however, being so extensively used that the early future will decide their value. The method used in our clinic in the operable cases is as follows: Previous to operation, one or more X-ray treatments are given; after sufficient time has elapsed, operation is performed, cautery of the cervix being done first, using the electric cautery; this followed immediately or after the lapse of a few days, by radical hysterectomy; after operation prophylactic X-ray therapy is given, using massive doses by the cross-firing method. In the inoperable cases, we are using roentgentherapy previous to operation, then the cautery treatment as recommended by Percy, this followed again by prophylactic roentgentherapy.

I would remind the radium enthusiast that approximately 20 per cent. of all cases of uterine cancer are refractory to radium. I would remind the roentgentherapist that roengentherapy will not cure all cases either; the champions of the radical cautery treatment well know that they have a large percentage of failures; the radical abdominal operation, even in the most expert hands, will not save more than 43 per cent.; in the hands of the average operator, 20 per cent. of five-year cures is the best that can be hoped for. With our present knowledge, it may be advisable to adopt a judicious combination of two or more of the above-named methods of treatment.

There is more being written about cancer in the medical press today than ever before, and the next five years will, we hope, bring more definite and accurate information, to the end that we may accomplish a greater good to a greater number of cancer sufferers.

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REFERENCES.

1. Freund, W. A. Bemerkungen zu meiner Methode der totalen Uterus-exstripation. *Centralbl. f. Gynäk.*, 1878, II, 497-503.
2. Ries. Eine neue Operationmethode des Uteruscarcinoms. *Ztschr. f. Geburtsh. u. Gynäk.*, XXXII, Heft. 2.
3. Clark, J. G. A more radical method of performing hysterectomy for cancer of the uterus. *Johns Hopkins Hosp. Bull.*, Balt., 1895, VI. 120-124, 3 pl.
4. Mackenrodt. Beitrag zur Verbesserung der Dauerresultate der Totalexstirpation bei Carcinoma uteri. *Ztschr. f. Geburtsh. u. Gynäk.*, 1894, XXIX, 157-170.
5. Stimson, L. A. On some modifications in the technic of abdominal surgery limiting the use of the ligature en masse. *Tr. Am. Surg. Ass.*, Phil., 1889, VII, 65-72.
   Ligation of the uterine arteries in their continuity as an early step in total or partial abdominal hysterectomy. *N. Y. M. J.*, 1889, XLIX, 277.
6. Bardenheur. Die peritoneal drainage. *Centralbl. f. Gynäk.*, 1881, V., 515-520.
7. Wertheim, E. The extended abdominal operation for carcinoma urteri (based on 500 operative cases). *Am. J. Obst.*, 1912, LXVI, 169-232.
8. Clarke, J. G. What do the newer methods of treatment offer the patient with malignant disease of the uterus? *N. Y. M. J.*, CII, 1915, 485-87.
9. Bumm. Zur Frage Wunderversorgung bei der

Radikaloperation des Carcinoma colli uteri. *Zentralbl. f. Gynäk,* 1913, XXXVII, 1-7.

10. Byrne. "A digest of 20 years experience in the treatment of uterine cancer by galvano-cautery." *Tr. Am. Gyn. Soc.,* XIV, 91.
Vaginal hysterectomy and high amputation, or partial exstirpation by galvano-cautery in cancer of cervix uteri. *Brooklyn Med. J.,* VI, 1892, 729-760.
11. Percy, J. F. The results of the treatment of the cancer of the uterus by the actual cautery, with a practical method for its application. *J. of Am. M. Ass.,* Chic., 1912, LVIII, 696-99.
12. Clark, Samuel. Value of the combination method in the treatment of cervical carcinoma. *J. of Am. M. Ass., Chic.,* LXV, 1915, 1171-5.
13. Wertheim. Bericte aus gynäkologischen Gesellschaften. Geburtschilflich-gynäkologische Gesellschaft in Wien. Diskussion. *Zentralbl. f. Gynäkologis,* 1915, XXXIX, 287.
14. Bonney, Victor. A review of modern gynecological practice. *Lancet,* Lond., 1915, II, 1283-89.
15. Flatau, S. Dürfen wir operable Uteruskarzinome ausschlieszlich bestrachlen? *Zentralbl. f. Gynäk.,* 1915, XXXIX, 611.
16. Exner. Quoted by J. G. Clark in *N. York M. J.,* 1915, CII, 485-87.
17. Cheron & Duval. Quoted by J. G. Clark in *N. York M. J.,* 1915, CII, 485-87.
18. Kelly & Burnam. Radium in the treatment of carcinomas of the cervix uteri and vagina. *J. of Am. M. Ass., Chic.,* 1915, LXV, 1874-8.
19. Schmitz. The action of radium on cancers of the pelvic organs. *J. of Am. M. Ass.,* 1915, LXV, 1879-86.
20. Bumm. Quoted by J. T. Case in *Surg., Gynec. & Obstetrics,* XXII, 1916, 431.
21. Case, J. T. Roentgen treatment of uterine carcinoma. *Surg., Gynec., & Obstetrics,* XXII, 1916, 429-36.
22. Haendly. Quoted by J. T. Case in *Surg., Gynec. & Obstetrics,* XXII, 1916, 429-36.
23. Von Franque. Quoted by J. T. Case in *Surg., Gynec. & Obstetrics,* XXII, 1916, 429-36.
24. Bumm. Quoted by J. T. Case in *Surg., Gynec. & Obstetrics,* XXII, 1916, 429-36.
25. Statement made to me by a visitor who attended Prof. Kroenig's Clinic at Freiburg August, 1915.
26. Kienboech. Quoted by J. T. Case in *Surg., Gynec. & Obstetrics,* XXII, 1916, 435.
27. Schauta. Bericte aus gynäkologischen Gesellschaften. 1. F. Schauta: a. Zur intrauterinen Radiumbehandlung. *Zentralbl. f. Gynäkologie,* 1915, XXXIX, 544.

THE NEW EPOCH IN OUR PRACTICE.*

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This occasion invites a retrospect and a prospect. We want to look back upon what we have done as practitioners and forward upon what we may propose to do. And there are two ways of doing this: One is the personal and the other the professional. As to the first, I feel I am safe in maintaining that we have upheld a fraternal spirit and a high sense of the dignity of our calling. Without these, I am sure, we can neither have respect for one another nor merit the confidence of the laity. As to the second, I am equally sure that there are those among us who have acquired a high standing for scholarship in the medical world. We have proved that it is true among physicians, as it is everywhere else, that character is no less significant than proficiency. If the physicians of our city are achieving appreciable success, it is due to the happy mingling of earnestness and honesty with loyalty to a professional ideal. Furthermore, we are not content to be merely medical practitioners, but take part, as good citizens must, in all public movements. You can find our men active in municipal and state associations, in civic movements of various kinds, and as contributors to the literature, medical and otherwise, of the times. Our work indeed, like the windows of our offices, has a wide outlook.

And we have done a third thing, equally a source of gratification: We have been true to one another. Our loyalties have been reciprocal. The physician who does the best that is in him reaps profit, but he secures also, however intangible it may be, a gain for all the members of his profession. No practitioner can develop within the limitations of sordidness, dominated by the dollar sign. If he attempts it, he will find that these limitations will shrivel him up. Experience and expertness in adding to the general health broaden and liberalize a man and keep him fresh and human and generous and just. We have co-operated frankly and cordially because we have found good in one another and have preserved the mutual respect due from one to the other. Happy the profession that leaves a man's heart clean, keen and responsive.

And still, in the face of these facts, you will allow me to call attention to a point of view which I observe, we do not yet sufficiently recognize. We do not take to ourselves an adequate scope of influence in the domain of civic life. We still limit ourselves to the relation of physician and patient and attend to the occasional patient here and the other occasional patient there. We fail to see that health is not so much a private as it is a public concern and that our office work and our bed-side work are trivial compared with the large issues which in these days

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of ours are flung out before citizens and communities.

It does not comport with our higher obligations nor with the opportunities of modern citizenship to fill our lives with mere repair and (excuse the term) tinker work. It is not commensurate with our high calling to merely wait for and upon individuals who get into private trouble, when society demands social reconstruction and reform. No profession is so well fitted as ours for constructive work, and the public has a right to expect a great deal from us. But while many are busy in large and statesman-like movements, too many of us rest content, like the traditional pastors and parochialists of the churches, in private and little things, and wait for the larger things to be brought to us.

Medical work has attained to social significance, but it appears we are the last to realize it. As a matter of fact, we should have had the wide view at the very start, for the history of medicine is a history of the very highest conception and valuation of life. The Medicine Man of the Indians stood sponsor for the loftiest conceptions of his time. The gods were in him. Even the Christian Scientists and the New Thoughtists, however irrational their theories, are paying the physician the unwitting and grudging compliment of sublimating him to the very highest level. There is a strain of idealism in our calling which we should guard jealously lest it slip into unworthy hands, and we have a sufficiently solid sense of practicality to make us especially useful in these days which call for men of efficiency.

A nobler task than curing the sick is the prevention of disease. Our ideal should be to make disease impossible, or at least unlikely. The cause of health is a human and not a personal cause, and hygienic conditions are a democratic necessity and a democratic right, and not a luxury or a privilege. Charitologists and legislators have said so; now let us too declare it. This truth comes from us with better grace and with more force. The oath of Hippocrates was never meant to bolster up a sordid conscience; it was meant to set our faces toward the widest-scoped duty. If we are to empty our reception-rooms of the sick, we must also fill homes and streets with the healthy. We have medical law at our command, and public opinion is reinforcing it, and the average of intelligence is higher than it has ever been. Our profession, also, is better equipped, and there are more broad-gauged practitioners in it than ever before in the entire history of medicine. Both public appropriations and private benevolences are at the disposal of the cause. Everything is getting ready for the great work, only we lag behind and fail to seize the opportunity that presents itself.

The Chinese pay their doctors for keeping them well, and like true Westerners we smile at the quaintness of the Orientals and miss the point. The function of the physician is to build up life, and to arrange conditions so that nothing may disturb or interrupt it. The doctor is to send off men, as it were, on their own recognizance, to give them the discernment and the power by which they may live their lives naturally, sturdily, happily. And he can do more, because he knows where others guess; he sees where others merely surmise. He can set forth the health problem clearly, whereas others are dependent upon expedients. We have the resources at our command, the understanding, the experience, and the very atmosphere of scientific accuracy. In the final instance, all those who want to help men upward and society onward, must appeal to us as arbiters and experts. We decide what is the right air, the right food, the right home, the right occupation, the right immunity, the right hazard, the right guarantee for young, for old, for the single, for the married, for homes, for institutions, for streets, for the market, for the day, the year, the seasons, for all that makes up the diversities and manifoldness of life.

We must be the consultants in the Supreme Questions of Life. The schools cannot do without our verdict, nor can the tenement houses, the streets, parks, homes for orphans, homes for the aged, hospitals, city planning commissions, prison boards, railroads and public transportations, water boards, public hostelries, nor the other agencies comprised in a well-regulated communal or national life. In all these matters we must have a voice for consultation and in administration. Dr. Reed of Cincinnati long ago urged the creation of the post of Federal Secretary of Health, with a seat in the cabinet. But there are physicians in this country—I say it with deep regret—who have been influential enough to prevent it.

It is a truism that lives are worth something, not merely to individuals, but also to communities; that they are an investment, as it were, not only to those who have them, but also to the industries which require them; that, in fine, they are an asset to the community which it is to its advantage to invest at the highest interest. Every sick man is an economic hazard, and when he is restored to health he

is restored not only to himself but also to his trade, business or calling—in short, to his community. The community has a claim upon him and also a responsibility for him.

I am not talking of a Utopia; I am talking of facts. They are before our eyes. Medicine is being given a social interpretation, and people—employers and employes alike—are asking us to advise them how to guarantee health, for both regard health as the essential capital—its possession an economic good, the loss of it an economic evil. They demand that we help them maintain their place, their interest, and their prospect. It is an economic question, and not simply one of personal pain or personal relief; and its economic aspect extends beyond the individual, even to municipal and national welfare. Can we afford to be silent? Can we afford to ignore public demand? Shall we allow ourselves to be pushed where we might enter with enthusiasm? Shall we forget the precious advantage of initiative? The finest part of our profession is our initiative. Have we lost it and has it failed just now when we need it most?

I fear we practice medicine as lawyers practice law, or as shoemakers make shoes—efficient in certain directions and taking rewards accordingly. We follow a private calling, for which the laity is supposed to award pay and recognition. There is a by-play of commercialism in us, even the best of us, and it is our good fortune only that we have not provoked the distrust and disdain which it deserves. The layman, I suppose, is too anxious to get well to stop to think out the matter. But here and there, I suspect, some find us perplexingly businesslike and sordid. In their eyes our calling is purely commercial. So our prestige and usefulness are undermined. Of course this low estimate of the profession is all wrong. There are plenty of high-minded physicians; I venture to maintain that there are more of this class in the medical profession than in any other, and, given a chance, the low-minded are thrust out of our ranks by none more promptly and effectively than by ourselves. But as a body we have been slow to catch the modern spirit; we have contradicted our corporate ideal.

We were the first social-service men in the history of social service, but we are the last to-day. Social service is the very logic of our being. The physician who hazards his life in experimenting with a drug or an inoculation is a martyr-servant for mankind, just as he is an enthusiastic student of science; and the daily risks we take, in a world of contagion and infection, are ample proof that we are eager to serve our fellow men even though the adventure cost us our lives. Who does not remember the "city physician" or "district physician" of a generation ago? His work was largely a form of charity. The logic was this: It pays to guard the city against disease. Disease is most prevalent among the poor, and the poor are the least capable of providing medicine and medical attention for themselves. So the city must provide it. Of course it was not within the same logic that the poor had a right to medical protection, and that patronage was an offense against citizenship as much as against tactfulness. But in the days when the social interpretation of civic affairs was in its beginning it was creditable enough that something was done for the public good, however modest and incompletely thought out. I for one am proud to know that we physicians were the first to serve in the pioneer days of this social service. But a greater day is dawning for us. The sense of civic responsibility is enlarging. We know now that our obligation is not merely toward those who are overwhelmed in the struggle for life, but toward those as well who are in the midst of it. We cannot divide our citizens into rich and poor, successful and unsuccessful. The social law knows no discrimination. Every trade, every profession, every occupation has its average of health, of usefulness, and of hazard and breakdown. There is a direct relation between economics and medicine.

Disease is the most unsocial fact we have, and he who helps to remove or combat it is a useful member of the community. Conversely we can say that health is the most precious capital the community possesses, and those who help in securing it are its most serviceable citizens. Just as formerly a city could not do without its charity physicians, so to-day, in the light of our social conceptions and municipal organization, physicians should be active on all boards of public service. I know of no department of city administration in which life and health are not involved and medical advice not needed. Factory establishments are incomplete without a medical department; it ensures the vitality of the laborers, protects them against accident, and enhances their efficiency. And cities likewise must learn to furnish these. The community is responsible for the health conditions it offers to its people. Health is not a private investment; it is a public trust. The corollary to this is that the physician is a public functionary and that he must step out of his small office into participation in public admin-

istration. We have a fine opportunity in this change. We can become builders of the city life and make the conservation of health a central fact in the community. The call comes not merely to the general practitioner who can serve in many ways, but to the specialist no less, for modern industries cause breakdown according to the organs which are endangered in specific employments. Modern sociology speaks of life value according to hazards, sanitation, food supply, and the rest. The kind of water, air, meat and milk a town gets fixes its health. When the town does not secure them, doctors are busy. Something is wrong with a town where doctors are busy. This statement may sound paradoxical, but it is such only because we have not grown up to its truth. Like teachers, doctors have achieved their best when they cease to be needed. Health is the essential of life, and we are derelict when people, barring accidents, do not possess it and cannot hold it.

Medicine must become municipalized and nationalized. The day may be far off, but it is coming, when we shall organize health conditions as we organize political, economical, and all other social conditions. We are familiarizing ourselves with that view, day by day, more and more. Every reform is approximate, but the progress is on. Our hospitals are already public institutions. The problem of our orphan asylums is intimately connected with the problem of public health (tuberculosis, etc.), laws of marriage and divorce, and the laws and conditions of employment. Our insane asylums have a direct relationship with home and labor conditions; and so on. We have been hearing the expert testimony of lawyers and statesmen. Now let us have the no less reliable diagnosis of the doctor, who, too, has something significant to say on the social good and the social evil. The demand for it has come through pressure from without; but its real force will come from within, from the higher consciousness and the competence of the physicians themselves. A profession is genuine by so much as it feels the social call and its social usefulness, and the medical profession is beginning to feel and to respond to both.

MERCURIC CHLORIDE POISONING. CASE REPORTS—SYMPTOMS AND TREATMENT.

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The strange imitativeness that actuates victims of depression who contemplate suicide, together with frequent newspaper references to mercuric chloride as a means of self destruction, have caused a great number of persons to select this stubborn, slow-working and painful poison in attempting to end their lives. Like carbolic acid, mercuric chloride is a common disinfectant and is often accessible to those suffering with acute melancholia. Many influential dailies no longer mention the poison used by persons committing suicide. This is a commendable policy. Meanwhile public hospitals, city physicians and general practitioners are frequently confronted with the problem of arresting the action and eliminating from the system this dangerous drug.

It is the purpose of this paper to review a regime which has proved invariably successful in cases which are in some degree hopeful. Conclusions are drawn from the observation of fourteen cases in the past eight months, six of which are cited in this paper.

Symptoms of poisoning appear almost immediately after the drug is taken. The primary symptom in every case seems to be abdominal distress combined with an extreme empty, nervous feeling. Shortly this is followed by pain in the epigastrium, which soon becomes general. Nausea and vomiting of the gastric contents is present in every case, often this is blood-stained. The stools, in the six reported cases, also showed evidence of blood. Diarrhea is usually present. Case (2) had constant involuntary bowel movements continuing for four days. Complete anuria is a common symptom during the first twenty-four hours. No convulsive seizures are, however, present as in uremia. If the kidney function is actively re-established the patient invariably recovers.

The length of treatment varies with the individual case; the character of it, however, is practically the same in all cases. The stomach contents are expressed and sent to the laboratory; then the stomach is thoroughly washed and the lavage water also examined. Through the stomach tube whites of several eggs are given together with three ounces of glycerine. If nausea continues the lavage is repeated in one hour.

The colon is irrigated three times daily.

Normal saline—intravenously—500 c. c.

Hot packs are given morning and night.

Proctoclysis is given continuously.

The patient is given, every five hours, one dram of the following mixture:

Tincture of buchu	1 ounce
Spiritus etherus nitrosis	2 ounces
Potassium acetate	2 grams

Urotropin ..... 2 ounces
Elixir simplix ..... 4 ounces

Diet consists of whites of eggs, milk and egg nogs.

The urine, voided or catheterized, specimens are sent to the laboratory daily. When it is found negative in three successive examinations treatment is discontinued.

CASE 1. L. A., age 23, colored. Admitted June 18, 1916.

One hour before admission patient swallowed two grains of mercuric chloride tablets. No treatment before entering hospital. Abdominal pain began within one-half hour followed by vomiting; severe bowel purging; stools bloodstained.

Laboratory.—Stomach contents, urine and stools all negative. Abdominal pain disappeared second day. Patient discharged the fourth day.

CASE 2. H. J., age 35, colored. Admitted Feb. 6, 1916.

Two days before admission patient swallowed fourteen mercuric chloride tablets with suicidal intent. Patient in semi-comatose condition; mouth foul, heavy sordes on teeth and entire oral cavity coated; tongue coated and thick; face very much swollen; congestion of tonsils and pharynx. Profuse salivation. Complete anuria. Vomitus green and blood streaked. Stools bloody.

Twenty-four hours after admission patient's condition improved. Scanty amount of urine passed at intervals beginning fourth day. Perspired freely after packs. Eighth day became unconscious. Died two days later. Stomach contents, urine and stools all give positive evidence of mercury.

CASE 3. L. F., age 21, white. Admitted June 20, 1916.

Prior to admission patient swallowed two grain tablet of mercuric chloride, burning pain in stomach began almost immediately. She took a glass of milk and came to the Hospital. Gastric lavage was given (examination disclosed mercury). Amount of urine normal and negative, stools normal and negative. Patient left the hospital two days later and is well.

CASE 4. W. G., age 44, white. Admitted Nov. 28, 1915.

Had taken four grains of mercuric chloride by mistake, thinking it was calomel. Severe abdominal pains began almost immediately with nausea and vomiting, and he was brought to the hospital. Gastric lavage and urine examination disclosed mercury. There was no salivation or foul odor. Stools were negative. Amount of urine increased daily with negative report after twenty-four hours treatment. Patient discharged five days later.

CASE 5. H. L., age 26, white. Admitted October 23, 1915, one hour after taking eight mercuric tablets with suicidal intent. Patient in semi-conscious condition and delirious. No other history obtainable. Vomitus and gastric lavage show evidences of mercury. Suppression of urine for twelve hours. Examinations were negative at the end of the seventh day. Regained consciousness twelve hours after admission, much salivation and foul odor. Discharged nineteen days later.

CASE 6. C. W., age 22, white. Admitted Dec. 11, 1915.

Admitted two hours after he had swallowed about twenty small Berney's tablets. Burning sensation in gastric region began almost immediately; then nausea and vomiting. Tongue and oral cavity coated and foul odor present. Stools blood streaked. Suppression of urine for twenty-four hours. Gastric lavage was positive to mercury test as was the first specimen of urine. Subsequent examinations were negative. Patient discharged ten days later.

THE TUBERCULOSIS SURVEY AS I SAW IT.

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The much and widely heralded Tuberculosis Survey commenced in our Court House on Tuesday morning, Sept. 26. Personally, I did not know what methods were employed by the physicians and their staff of nurses to obtain immediate findings either for or against the presence of the disease, at any rate in its incipiency. I found that the examinations were made with extreme thoroughness though no new, or comparatively new, means were used, except rarely the Calmette and von Pirquet tests.

As the examiners came a day sooner than advertised they were almost that time at work before I knew of their presence in the city. Being intensely interested in their coming I went to the Court House although it was well towards the end of the afternoon. The arrangement of the building, with its large comfortably seated hall, numerous small rooms, stands, desks, etc., chanced to be an ideal place for the accommodation of the large number of people waiting to be examined as well as for the physicians and nurses in charge.

We have not a large city nor a populous county and the latter is dotted with villages where members of the Survey were at work so that the number of people in our Court House when I went in quite surprised me.

I walked up one of the aisles and stood for

a moment looking into their faces. Few were new to me and all bore a look of intense interest and concern.

In front of the railing which separates the auditorium of the court room from the large space which is set apart for the Bench and Bar, or court proper, the numerous tables, arm chairs, and even the Judge's Bench itself were occupied by patients, and quiet earnest nurses taking histories, temperatures, and counting heart beats. Behind screens other nurses were lending their aid in the disrobing and preparation of patients awaiting their turn for examination. In rooms on either side were the examining physicians busily at work attempting to dig out every sign, every symptom, every mite of history and pathological entity that might in the remotest degree have a bearing on conditions of the past or what at present existed in the chests before them. All, that with reasonable certainty, an outline for the future might be made; and directions given that would be of lasting benefit to the individual, his immediate family, and in fact, to the whole community.

The gathering was not a jolly one. As the sun was dropping behind some tumbling autumn clouds he shot shafts of light across the faces in the waiting room and those faces reflected back the silent musings of the anxious spirits at work within.

Old and young business men, artisans, and laborers—some robust looking, some exhibiting telltale signs—sat wondering what their sentence or the sentence on some relative or friend would be. Comfortably dressed, also smartly dressed, women and girls touched elbows with others in patched and frayed clothing that was anything but smart or fitted for the shrinking hectic creatures within them; but all were on the same level, the same mission; all awaiting a positive or a negative verdict or sentence; and nothing could be nearer a real sentence, or a complete and assured freedom than the expressed prognosis of the doctors as they ended their search for the presence of that death dealing entity—the bacillus tuberculosis.

As the physicians spoke the inspiring words that indicated a freedom from disease, or assured the unsettled mind of an emphatic response to wise actions and correct living the effect was magical, the transformation from solemn dubiety to joy, most unmistakable. On the contrary, a few kindly hints with the bitter meaning of an indefinite hopeless misery or fast approaching death created a shock that held out to all present the mighty meaning of this odd gathering of sick and well, demonstrating to everyone present the far-reaching effects, also the benefits that surely will come from our Statewide Tuberculosis Survey.

I had heard the survey idea and its objects dubbed all sorts of things from a wild dream to political bunkum; and those who took part in it more or less a bunch of pleasure seekers abroad in the state spending money that belonged to the "dear people" as well as interfering with their constitutional rights and personal liberties. Even members of our profession openly doubted the practicability of the scheme; but now in Alpena, at least, the physicians and public alike join in the highest encomiums of the real interest awakened and the work done.

It was refreshing to note that no pretences were made to do impossible things nor that anything mysterious or very unusual was being done. Simply an earnest endeavor on the part of a corps of trained men and women to arrive at and impart the truth by the best methods known to medical science. I am not a novice at chest work myself so feel reasonably competent to judge, and I am stating but plain facts when I say that from the falling of the patients into the hands of the kindly and thorough going nurses to the final word of the examining physician every action was taken and every move made with the utmost care and deliberation—all with a spirit of keen interest in the difficult problem of making a correct diagnosis. No claim of perfection was even hinted at and the doubtful were marked as such. The instructions and warnings given this class alone, in our community, were in my opinion worth fully one-quarter of the entire state appropriation and who can tell the real limit of the benefits that may accrue in the future?

The cure of the curable and the arrest of the disease in others are tremendous factors but both sink into insignificance when compared with prevention. And how is prevention going to be brought about without discovering the individuals who are the innocent sources of the disease: then protecting their relatives and

friends as well as the public from them? In many cases, indeed, protecting them from themselves; and in all cases providing means for the care and, if possible, cure of the afflicted. In all of this the work of the Survey stands out prominently and while that fact was forcefully brought out here another was also demonstrated; viz., that the people are rapidly awakening to their own needless sufferings. They are asking questions and as near as they can obeying instructions. They are trying out what to them are new ideas and principles. They are listening and looking with bated breath and searching eyes for every atom of knowledge and ray of hope that is within their reach. I believe there is hardly a family, either in itself or in some of its ramifications, that has not been fatally hit by tuberculosis and this with the unthinkable misery and suffering is now being made to pass from the "dispensation of Providence" idea to the realm of common sense, cure, and prevention.

At a meeting of the Alpena County Medical Society held on Thursday evening, September 28, at which all the members of the State Survey were invited guests, it was decided to hold a free diagnostic clinic once a week to be conducted by local physicians assisted by our capable visiting nurse. Since that time the clinic has been held under the auspices of the Board of Health and the number applying for examinations and instructions has been greater than could be taken care of by several examiners in the time allotted. At a meeting of our board of supervisors on October 13 a hospital for tuberculous patients was pleaded for with the result that by unanimous vote a resolution was passed signifying the need of such a place and appointing a committee with full power to act —and that means a suitable sanatorium for the care of such cases in Alpena county in the very near future.

The State Survey did not do this but it paved the way, stirred up the people to a realization of their condition and their needs and backed the local physicians so that it was all brought about. If the Survey is doing a like work all over the state and its efforts are supported in the same manner the name of Michigan will be written in letters of gold across the scroll of all time; for, "every tree shall be known by its fruit."

Hydras.—The Council on Pharmacy and Chemistry reports that Hydras, sold by John Wyeth and Bro. is one of the so-called "uterine tonics," said to contain "cramp bark, helonias root, hydrastis, scutellaria, dogwood and aromatics" in unspecified amounts. While the name, taken in connection with the composition, suggests that hydrastis is an important constituent, the A.M.A. Chemical Laboratory found this drug to be present in unimportant amounts. The Council finds Hydras inadmissible to New and Nonofficial Remedies because its composition is semi-secret; because the recommendations on the label for its use in specified diseases, and the advertising accompanying the bottle are sure to lead to its ill-advised use by the public; because the claims made for its curative properties are exaggerated and unwarranted; because the name is misleading and because the combination of these five drugs, even if individually they were of therapeutic value, is irrational (*Jour. A.M.A.*, Oct. 7, 1916, p. 1107).

Patent Medicines Prosecuted under the Food and Drugs Act.—The following information was brought out in connection with prosecutions by the federal authorities under that portion of the Food and Drugs Act which provides penalties against misleading, false and unwarranted therapeutic claims: Radway's Ready Relief was claimed to relieve rheumatism, sore throat, pleurisy, pneumonia and other conditions. The government chemists found the preparation to be a hydro-alcoholic solution of oleoresin of capsicum, camphor and ammonia. Ingham's Vegetable Expectorant Nervine Pain Extractor was found to contain alcohol 86 per cent., opium alkaloids, camphor, capsicum and vegetable extractive matter. It was claimed that this morphine mixture was not only safe and harmless, but positively beneficial when given to teething children. Tetterine was said to be a marvelous remedy for tetter, eczema, etc. Maigmen Antiseptic Powder according to the government chemists is composed essentially of calcium carbonate, borax, aluminum sulphate and sodium carbonate. Among other things the exploiters of this powder, which at one time was advertised to the medical profession, tried to persuade the public that the preparation would "sterilize" the stomach, throat, nose, lungs, etc. Green Mountain Oil or Magic Pain Destroyer was found to consist essentially of 95 per cent. linseed oil, with oil of sassafras, oil of thuja, and oil of turpentine, with possibly small amounts of camphor. According to the claims made on the trade package, this stuff was said to be "A Remedy for Diphtheria, Croup, Deafness and Sore Eyes, Rheumatic Pains, Stiff Joints, Pains in the Back" and many other ailments. Mrs. Joe Person's Remedy was found to be a slightly sweetened water-alcohol solution of vegetable drugs with a minute trace of alkaloids and the presence of podophyllin and sarsaparilla indicated. The preparation was claimed to cure such things as "blood poison," eczema, malaria and pellagra. Tutt's Pills were fould to consist mainly of sugar, aloes, starch and calomel. The nostrum was sold under claims to the effect that it was "a remedy for intermittent and remittent fevers, dropsy, dysentery, diseases of the kidneys and bladder," and a number of other conditions (*Jour. A.M.A.* Oct. 28, 1916, p. 1316-1317).

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Editorials

GREETINGS.

"In lowly hut and palace hall
Peasant and king keep festival,
And childhood wears a fairer guise,
And tenderer shine all mother's eyes;
The aged man forgets his years,
The mirthful heart is doubly gay,
The sad are cheated of their tears,
For good-will and peace, peace and good-will
Ring out the carols glad and gay."

The unobstructed march of time once more brings before us that season of the year that causes us to slow-up for a moment, forget the distant goal and induces one to pause and participate in the festival celebrations. It is the season that arrests the activities of all, from peasant to king, from infancy to age—to each there is given a participating part. True some may have greater reasons for joy and celebration, while others there are who are passing under a cloud—still upon all there will be reflected the holiday spirit.

So to our members and readers *The Journal* extends the heartiest greetings of good cheer and good wishes and extends its salutation to all for a Merry Christmas and a Happy New Year. May the season of celebration vouchsafe to all a period of unalloyed bliss and happiness.

INDUSTRIAL SURGERY.

The principles of industrial surgery are daily becoming more and more established. Fundamental axioms that are proven essential for one to possess when attending cases of industrial injuries have been determined. Methods of procedure are definite in given conditions. The work has become to be a distinct specialty.

In view of which we believe and are firm in the opinion that our University and the Detroit College of Medicine and Surgery might well and profitably arrange so that its senior classes might secure the benefit of a series of lectures and clinics upon this subject. The Summer Course of the University might also incorporate a post-graduate course in this subject so that practitioners might avail themselves of it and be better prepared to care for this class of patients. We are sure that this suggestion merits the attention of our Educational institutions.

A MESSAGE TO THE COUNTY MEDICAL SOCIETIES.

In 1902 under the re-organization plan of the American Medical Association the membership of the State Medical Society was enlarged by the re-organization of the existing County Societies and the formation of others, so that every County in the State has a society of its own or one in affiliation with adjoining counties; to which membership every eligible physician is invited. This plan required the earnest thought, devotion and efforts of the officers and members of the local and state organizations and much credit is due them for their untiring labor. The machinery is now so perfected that with small attention it runs itself with but little friction. It would be wrong, however, to assume that with the machinery in good running order the work of the members is simply of a routine character. During the last decade there has been a vast awakening of the public to medical problems and the relationship of the public to the profession has undergone great changes. In many things the laity has taken the initiative and in many undertakings the value of the physician as a force in their successful working has been unappreciated or deliberately ignored. One needs to refer only to the Workmen's Compensation Acts, to Social Insurance, to Health, Sick and Accident Insurance, to lodge practice, to housing conditions, to the examination of children in the public schools, to the relation of hospitals and dispensaries to the public, to the examination and

care of the thousands of employees in the large manufacturing centers, to public health matters in general, in all of which the profession is vitally interested and in reality must be the principal actor to command success. Whether as individuals we believe and welcome these changes matters little. Social and economic conditions demand them and it behooves us to see that our interests are safe-guarded; namely that the dignity of our calling is upheld and that our reward is such that proper services may be rendered the sick. The moment that in normal times the services are so exacting and unremunerative that proper service cannot be rendered or the health of the community cannot be safeguarded that moment the relation of the physician to the patient and the community is improper. Again it behooves us to enter into an intelligent discussion with the public in all these important questions. The physician by education and training is the proper educator and should have a deciding voice in all affairs which affect the health of the community. I know by my work as a member of the State Board of Health that the laity welcomes this instruction and, therefore, as your President, urge upon you as members to get into closer touch with your community through the press, in the pulpit and on the platform, that the social improvements needed may not fail for want of earnest and intelligent cooperation.

Most of the County Societies meet this or next month in annual session. There is in the suggestion outlined, I trust, much food for thought and much more for action during the approaching year.

ANDREW P. BIDDLE.

SOCIETY PROGRAMS.

The program that will hold the interest of our members, in my judgment, must be one that lends the greatest possible help towards the solving of the problems met with in every day practice. Concise and carefully prepared papers, together with a full and general discussion of the subject of the papers read, will in all instances bring out clinical suggestions and clinical helps to every practitioner present.

Papers arranged correlatively as a symposium on e. g., "Diseases of the Liver," "Diseases of the Gall-bladder and Bile Ducts," "Diseases of the Circulatory System," "Diseases of the Blood and Ductless Glands," Diseases of the Respiratory Organs," "Diseases of the Kidneys," etc., etc., and on Obstretrical and Gynecological subjects, will prove more helpful and interesting than will papers on subjects selected at random and at the whims of the authors. I am of the opinion that it is far better to have a program for the entire year compiled by a committee selected for that purpose and printed copies of same made and distributed to all members, thereby relieving the president and secretary of a considerable trouble in drumming up members for papers, allowing the members to know in ample time the topics assigned to them, and affording every member an opportunity to look up any and all subjects he chooses to better inform himself upon.

If we adopt this course I believe we are certain to have fuller discussions of the papers read and this, we all realize, is a great factor in cementing the good fellowship and in aiding the welfare of the local societies. In this way the efforts of members are towards a mutual helpfulness and any disposition to "star" by springing unusual and intricate subjects will be overcome. Of course, we wish to have all interesting and unusual matters that arise in practice brought to our attention, and provision is made for this in the "Order of Business" of the meeting, under "Clinical Cases."

The longer we are in practice the more readily we recognize the value of often repeated reviews of the anatomy, the histology, the physiology, and the functions of all parts of the human machine before we take up the pathological conditions and consider their treatment, so we can most profitably include papers on these subjects in our symposiums. A continuous routine of solid papers is very apt to become more or less tiresome and monotonous and some method of overcoming this wearisomeness may well be considered. Probably nothing better can be done than to have occasional "get-together" luncheons and smokers, either at the regular place of holding the meetings, or else at the homes of the members, where the practitioners may become better acquainted, enter into closer friendships, and where sociability and good fellowship will abound. To insure against disappointment by not having any paper read at a regular meeting, should an essayist of the evening find it impossible to attend, we believe it is well to have two papers on the program for the evening, and where members from the outlying districts and from towns adjacent to the one in which the meetings are held are on the program it may be advisable to have two papers by resident practictioners, in addition to that of the nonresident member, for the

same evening. Lastly, it is within the power of the president of the society to add greatly to the interest of the program by being tactful in securing full and general discussions of the papers read, for the biggest thing on the program is "a full and general discussion."

R. C. WINSLOW.

SEASON GREETINGS.

"With hopes for a larger and more closely united Michigan State Medical Society, in which the Thirteenth District is eager to do her part, I extend the season's greetings."

F. C. WITTER,
Counselor Thirteenth District.

TO THE MEDICAL PROFESSION OF THE SIXTH COUNCILOR DISTRICT.

Without health, inherited and maintained, no full degree of happiness and well being can come to any man. Strong, robust, physical and intellectual health is the greatest asset of men and of nations; yet how pitifully is that God-given fortune broken, wasted, and dissipated to nothingness. And why? Ignorance of right ways of living is the answer.

These are the days of the "efficient expert" who teaches how to do things right. The Medical Profession must be the efficiency expert, to teach men how to so live that their lives may be happiest and most productive of all that is worth while, vouchsafing to unborn generations strong minds in strong bodies.

With our mission clearly in mind individually, we can, through organization and co-operation, hold front rank in the Army of Progress. This is our work of real "Preparedness;" and may the New Year be to you and to all of us, one of happiness through achievement in this line of duty.

Sincerely and fraternally yours,

ARTHUR M. HUME,
Councilor Sixth District.

Lapeer, Mich., Nov. 13, 1916.

In answer to your letter: The thing that comes most prominently into my mind is, Better County Meetings and how to make them so. Every society may have a special cause for its sickness and require special treatment, but there is no one thing that will enliven it and enthuse the members like meeting often.

From our experience in Lapeer County I am convinced that if the Society meets on a three months schedule it is a hopeless task to keep it from dying a slow death and this would be equally true of a society in a city that met only once a month.

This summer, in Lapeer County, we have tried having a meeting every month. With one exception we have had a good attendance and the members are enthusiastic over it. We will have a mid-winter meeting and begin again in April to have our monthly meetings. During the first three months of the year our Secretary will—as he did last year—have made arrangements for our whole summer's program. It is just as easy to do this at once as to do it piece meal. It looks better and the effect is good on the membership. They know what the program is and that it has been arranged for long enough ahead that there is not likely to be a disappointment.

The mid-summer and mid-winter meetings should be of a social nature. The mid-summer a picnic and the mid-winter a banquet followed perhaps by a dance. I believe there are a lot of Doctors' wives who would enjoy renewing an acquaintance with the old time pleasure of dancing and I am sure there would be no question about the daughters enjoying it. My experience has shown me that wives take a deep interest in the society and retain it longer than their husbands, and if you give them opportunity to be present by having a social meeting Mr. Man will have to come along no matter how many excuses he makes.

Meeting once a month in different towns in the county is no hardship in these days of automobiles and judging from our experience in Lapeer County these suggestions will be found "good medicine" for the society as a whole and especially the officers who strive for a good live society and are often disappointed.

Wishing all our members and especially those who labor for the common good a Merry Christmas, I am

Yours Fraternally,

W. H. KAY.

Editorial Comments

The Indiana State Medical Society at its annual October meeting raised its state dues to $4.00 per annum. It was also determined to employ a full time secretary and business manager, to induce greater organized activity and

to protect the interests of the members in legislative and civic affairs.

New advertisements in this issue. Our members and readers attention is called to them with the earnest appeal that the opportunity be utilized to cause these business firms to realize upon their investment in your publication. It is impossible to maintain a high standard if you do not exert some effort to cause advertisers to realize that this publication is a valuable medium for reaching the profession of Michigan. Write to them to-day.

The index for this volume is contained in this issue. We have endeavored to eliminate errors and to make it all that the term stands for.

The "Fee-Splitters" attempt to organize has been cleanly exposed by the *Missouri State Medical Journal*. The effort was made to form an organization of American doctors with an advanced object of scientific investigation. The disguise was penetrated and the basic purpose of the organization was shown to be composed of individuals—not men—who brazenly barter in human lives for the sake of financial profit.

The American College of Surgeons has appointed a Committee to visit South America to inspire a closer professional relationship between these two American provinces. It will undoubtedly be a junket of pleasure, hardly called for. There are pertinent problems in our own midst that should receive attention before stepping beyond our geographical boundary.

Our Committee on Public Policy and Legislation has arranged to keep informed as to proposed legislation that will be presented to this winter's session of the Legislature and which has a bearing on health and professional interests. County Societies are requested to appoint local committees to co-operate with our State Committee. When such appointments are made it is desired that the name of the Chairman be sent to the State Secretary so that they may be promptly communicated with whenever necessary.

Bay City has extended an invitation to the State Society to hold its 52nd Annual Meeting in Bay City. The Council, at its January meeting, will determine the time and place for the holding of our next annual session.

The American Association of Anesthetists has addressed to the Michigan State Board of Registration in Medicine a request that the Michigan law be enforced to prevent a nurse from acting as an anesthetist. The *Journal* greatly desires to receive a discussion of the subject by those who have an opinion for or against a nurse acting as an anesthetist.

AMERICAN COLLEGE OF SURGEONS.

ANNUAL MEETING OF THE FELLOWS HELD IN PHILADELPHIA, OCTOBER, 27, 1916.

The purposes, the actual work, and the plans for the future of the American College of Surgeons were so definitely brought out at the recent annual meeting of the Fellows, held in Philadelphia, that the following condensed report of the meeting is of interest. Only such matters are here included which are of general interest to physicians and surgeons.

George W. Crile was elected President of the College and Chairman of the Board of Regents, to succeed Dr. J. M. T. Finney who had served the College in this capacity since its inception. Rudolph Matas was elected First Vice-President, and Robert G. LeConte Second Vice-President. The Board of Regents as now constituted is composed of George E. Armstrong, Montreal; Henry S. Birkett, Montreal; George E. Brewer, New York; Frederic J. Cotton, Boston; George W. Crile, Cleveland; J. M. T. Finney, Baltimore; William D. Haggard, Nashville; Edward Martin, Philadelphia; Franklin H. Martin, Chicago; Charles H. Mayo, Rochester; Robert E. McKechnie, Vancouver; Albert J. Ochsner, Chicago; Harry M. Sherman, San Francisco; Frank F. Simpson, Pittsburgh, and Charles F. Stokes, Warwick.

REPORT OF THE DIRECTOR—JOHN G. BOWMAN.

Three years ago Sir Rickman Godlee brought to the Fellows of the American College of Surgeons the greetings of the Royal College of Surgeons. On that occasion Sir Rickman said that he would give us ten years in which to get our organization under way. On this occasion it is my privilege to report to you the workings and progress of the third year of that task.

This is our annual meeting. It is a serious occasion on which we pause and look backward and forward. It is an occasion on which I beg that each of you will hold an annual meeting with yourself as well as with one another; for however perfect the machinery of the College may be, that machinery will never take the place of character, of leadership, and of that something we call affection. Trust, co-operation, and constructive inspiration, are the things which in the end make for success. These are the things which must stir in the hearts of each of us if collectively we are to accomplish great work.

This report now will touch chiefly upon two subjects: First, the admission of Fellows to the College; second, the investigation of hospital conditions.

ADMISSION TO FELLOWSHIP.

During the past year about 200 Fellows have been admitted to Fellowship. These 200 Fellows were selected out of about 2500 applications for Fellowship now on file. Of the 200 admitted about one-half submitted case-histories as evidence of their qualifications in surgery. We have now enrolled about 3700 Fellows.

Quite beyond the realization of most of the Fellows, the policy of the Regents is to admit only those surgeons who beyond all reasonable doubt are competent and honest. On the other hand, the Regents propose definitely to invite all surgeons to Fellowship who meet these qualifications and to sift away all personal prejudice in making their decisions.

Some details of the process of admitting Fellows may here be of interest. In each state we have a State Credentials Committee of from five to nine members. These committees are elected by the Fellows of their respective states. All applicants for Fellowship from a given state are then submitted to the State Credentials Committee concerned. Service on this committee is a serious trust. The committee is asked to pass upon each candidate, having before it not only the data obtained by the central office, but also the data obtained at its own initiative. Each committee is asked, further, to give its reasons for its decisions.

After action has been taken by the State Credentials Committee, the applications are then reviewed by the Central Credentials Committee which meets about every other Monday evening at the offices of the College. When a candidate is approved by his State Committee and by the Central Committee, he is then privileged to submit one hundred case-histories (as outlined in Bulletin No. 1) as further evidence of his qualifications. But he is not given this privilege unless there is abundant reason to believe that he is qualified.

In the judgment of the Regents these case-histories are proving to be a very genuine test of fitness. The histories, when properly recorded, make clear the data on which each diagnosis is based; they make clear the physical findings, gross and microscopic, and the laboratory analyses. The family history and what happened at the operation and the end-results are also important factors.

During the past year about 60 per cent. of those who submitted case-histories failed of final approval. This large percentage failed because the histories were incomplete or because the diagnoses were not based on sufficient evidence, or because, having the evidence, the diagnosis indicated lack of good surgical judgment. These failures, however, do not necessarily mean that the candidates are rejected for all time. In some instances, where success was nearly attained, the candidate may try again. In other instances the candidate may try again only after submitting satisfactory evidence of additional preparation for the practice of medicine and surgery. The Committee on Examinations makes a written report upon each case together with its recommendations.

In all of this work comes a large human element which cannot always wisely be subjected to arbitrary rules. Time does not permit now of illustrations. But let me say that the care and fairness with which each case is considered has been to me a constant inspiration. Few of you, I am sure, realize how much effort goes to make up the final decision of the Regents. The Regents know that their trust to you is to make these final decisions right.

INVESTIGATION OF HOSPITAL CONDITIONS.

The actual contact of the College, it seems clear now, will come not only with the profession, but also with the general public through our proposed work among hospitals. This work is not merely something which we may do; it is something which we must do. It is our business to know what real training in surgery means. That has been obvious to all of us from the start. And it is a true estimate, I believe, to say that 80 per cent. of what a surgeon uses in practice he acquires during his interneship and hospital training. In other words, the particular training ground for the surgeon is the hospital. Forced upon us, then, is the obligation to know what this training ground is, and what kind of a standard we should hold up to ourselves as the proper training of a surgeon in a hospital. Further, the problem of the training of a surgeon in a hospital cannot be isolated as a separate factor of the hospital's program. We cannot say that here the training of the surgeon begins, and that there it ends, for the training of the physician is also largely the training of the surgeon. The problem involves us in the whole question as to what is the proper care of sick people.

There are specific divisions, however, in every hospital which we may investigate, and, having accurate data, we may point the way of progress. For example, what is the condition of the case-histories of a given hospital? Are they complete? Are they accessible for study and future guidance? Are end-results followed up with conscientious common sense? Are summaries of these results made public as evidence of the competence of the physicians and surgeons practicing in the hospitals?

We may ask, further, what the conditions are of the hospital laboratories. Important elements in the training of the surgeon are that he know how to use the laboratory, and that he form a habit of using it. What are the laboratory facilities which a hospital of a given number of beds may reasonably be expected to provide? Are the laboratory findings made a part of the case-histories? Does the pathologist make a permanent report of his exact findings? To whom are such reports made? Do the

superintendent and the trustees who are responsible for the government and the administration of the hospital take pains to assure themselves that the work of the laboratories is competent and that reports of findings are fearlessly set down?

This last question leads to the whole problem of hospital administration. We cannot avoid it. What is the relation of the Board of Trustees to the medical staff? Or to the hospital superintendent? In passing, let me say that it is the business of the superintendent to carry out the directions of the Board of Trustees. He should be told what kind of a staff is privileged to practice medicine and surgery in the hospital. He should see to it, then, that only men worthy of the hospital's ideal are given this privilege.

There is one superintendent in this country whose ability to meet this difficult problem is an inspiration. His hospital, as it happens, is one of "open staff." The superintendent has not raised any technical questions as to the merit of an "open" or a "closed" staff. To him competence and honesty are fundamental. He has made it his direct business to know what goes on in the operating room, and to know what happens in the particular case before the operation occurs. If a surgeon operates in that hospital without evidence of genuine ability, the superintendent, after the operation is over, quietly puts his hand on the man's shoulder and says, "We do not want you to come back again. Your work is not satisfactory. If you wish to make an issue of this matter, I will meet you. You are privileged to return, however, whenever you will show that you have acquired the training necessary to modern surgery."

The trustees support this man. What is the result? The hospital is still of the "open staff" type, but in practice it is more "closed" than most "closed staff" types. The trustees of this hospital are able to say to the people of their city that their hospital is a genuine guarantee of competent, honest service.

Why shouldn't the trustees of other hospitals be able honestly to guarantee to their communities honest, competent service? Such a condition is one of the things which the American College of Surgeons proposes to bring about. It proposes to deal with these problems in no uncertain or half-hearted fashion. The central part of its effort will be a series of pamphlets written so simply that the man who moves his lips when he reads can understand. These pamphlets will deal one after another with the things which make hospitals the right sort of institutions for the care of sick people. Sometimes it may be necessary to call meetings of the local commercial clubs, or of the other bodies of laymen, in order to waken up the community as to the actual conditions in their hospitals. If this course is necessary, it will be followed. The day has gone by when any sort of indifferent or incompetent practice can be shielded in a hospital. The day has gone by when hospital trustees may rest in an irresponsible attitude toward the trust imposed in them.

Again, what is the relation of the hospital to the county or local medical society? Are the facilities of the hospital freely at the service of the society? Is the spirit which dominates the work of the hospital an inspiration? Is it progressive and unselfish? These are merely some of the questions which the College of Surgeons proposes to answer in the fashion already indicated. It is probable that we shall begin with a study of the training of the internes. This problem is most closely related to our needs in the administration of the College. Further, if we go right to the bottom of the problem we shall find that it is really a question of what is the proper care of the patient. A full outline of this problem has already been sent to you.

You are a group of surgeons of more than average ability. You are deeply concerned with the advance of the profession; otherwise you would not be here. You are concerned that the great mass of people should know the right answers to the questions just proposed. In these things and by the very nature of your daily routine you are compelled to be philosophers. The process of thought which tends from anatomy to psychology, and then from psychology to philosophy is forced upon you. Philosophers rule the world. They do this to-day, and they always have done it. The man of action may not know that this proposition is true. But that is aside from the point. Now there is good philosophy and indifferent or bad philosophy. Of these you must choose. In other words, you must find and express thoughtfully the personal equations of your lives. You must express in terms which we all understand the x and the y of your equations. How will you do it? Are you in the practice of surgery primarily to make money? Are you in it primarily to relieve suffering and prolong life? Are you in it to lift your community to a plane higher than it would be without you? Can you find your equation in scientific research? Are the inspiration and thrill which come from entering an unexplored field of truth and in finding there something of lasting benefit to humanity—are these things known qualities in your equation?

That you answer such questions is what I meant when I asked you each to hold an annual meeting with yourself. Some time ago, near Nashville, I visited the old home of Andrew Jackson. Jackson, it seems, left a slave by the name of Alfred who outlived him many years. One day Alfred was asked if he "reckoned" that the General went to Heaven. "I dunno, suh," he replied. "He did if he wanted to." That is the sort of philosophy which stirs me. We can do things if we want to. We can do all that we hope to do if we really want to do it. If the objects of this organization really coincide with the desires deep in our hearts, we can turn our inspirations into facts in spite of any opposition in the world.

Now a word about fee-splitting. This is a subject which I should like to avoid. It is a disgrace that there is need even to mention it. But there is need. Any one who divides fees is a liar and a

thief. If milder terms would fit the case I would use them. They will not fit. This evil is the basis of unnecessary operating and of incompetent operating. The College has plans now to fight it beyond anything yet attempted. But we cannot go into that subject now.

The Board of Regents has just held a meeting. It has just considered the names of seven Fellows of the College about whom there is some evidence of the practice of division of fees. After full consideration, the Board dropped three Fellows from our list. Two of these are suspended pending further information. The Board voted, further, to make public the names of men expelled from Fellowship. (The name of a Fellow was read who was expelled for "reasons derogatory to the dignity of the College and inconsistent with its purposes.")

The work of the past year has developed a most important fact in this connection. A surgeon cannot engage in the division of fees and cover up the practice. The Regents do not propose, either, that the practice shall be covered up. They mean business, and propose to expel any Fellow from our group, however prominent he may be, whenever the facts justify such action.

We need your help, your co-operation, and your constructive inspiration. We need your belief in us; your confidence that nothing crooked is ever to be put over; your confidence that the biggest things that have ever happened in medicine are to be put over. When you joined the American College of Surgeons you did not join merely one more medical society. You joined a society which commands that if there is any white light in you, it must burn. It commands that you grasp the day's routine as a social service and in this twilight era that you illuminate those outlines, now only traceable, of the public good will which the profession should merit. It commands that you turn on the light.

ANOTHER STEP IN HIGHER MEDICAL EDUCATION.

Among the remarkable developments in medicine anywhere, at any time, are the changes that have occurred in medical education in the United States during the last ten or fifteen years. Once regarded as a disgrace, the standard of medical education in this country recently has advanced so rapidly that today it is equal to that of any other nation so far, at least, as the majority of medical teaching institutions are concerned. This change has occurred partly through the generosity of wealthy men and women who have contributed millions to medical schools and to medical research; partly because the medical profession itself became aroused to the wretched conditions in medical education, and undertook to rid itself of the incubus of the purely commercial medical school. Both were necessary to bring about the rapid advances that have placed American medicine in the high position it now occupies.

The announcement just made of the establishment, as a department of the University of Chicago, of a new medical school, complete with postgraduate departments, extensive hospital facilities, numerous research branches, with a standard as high as that of any medical school here or abroad, and with an endowment sufficient to meet the expenses connected with full-time, paid instructors in all departments, is one of the most important events connected with the rapid development of scientific medicine and medical teaching in this country. It means much not only to medical education, but, more important, to public health, for it will be not only a teaching institution—an institution that will make for better and more broadly and practically educated medical practitioners—but also an institution for the development of preventive medicine. It means much to the city of Chicago—once the home of more quack medical colleges and diploma mills than any other city in the world. It will aid the city, which was the plague spot of medical education, to rid itself wholly of the commercial school and to develop medical institutions second to none. But the influence of this new institution will be broader than the city or the state in which it is located. It will be national, and will reach out and stimulate good work in every part of the country.

To President Harry Pratt Judson, of the University of Chicago, and to Dr. Frank Billings, Dean of Rush Medical College, is due, to a large extent the credit for this achievement. It means the successful culmination of President Judson's ambition to carry out not simply the original plan of his predecessor—once looked on as a dream—but a greater and broader one than even President William Rainey Harper conceived.

Correspondence

November 10, 1916.

Dr. F. C. Warnshuis,
Grand Rapids, Mich.

Dear Dr. Warnshuis:

The editorial in the November issue of *The Journal of the Michigan State Medical Society* upon "The Nurse Anesthetist" has been read with much interest. Having had considerable experience in institutions in which anesthetics are given by registered physicians, as well as in institutions that employ specially trained nurses for this purpose, I can state positively that there are not two sides to the question.

The arguments given against the giving of anesthetics by well trained nurses apply equally to the physician, as well as the nurse, and the statement that "The administration of an anesthetic should never be intrusted to any but skilled individuals," covers the entire subject in a nutshell. There is not the slightest room for argument in the statement that the well trained nurse is more skillful in the administration of anesthesia than an equally well trained man. She is interested in the giving

of the anesthetic alone, and does not try to keep track of the operation as well. She therefore gives less ether and gives it according to the needs of the patient. She always watches the patient more carefully and is decidedly more gentle and careful in its administration during the first stage which makes for a better anesthetic throughout.

The statement that the person who administers the anesthetic must be competent to make a physical examination, to detect renal, circulatory and respiratory defects and to estimate the variance from the normal that disease or surgical conditions have produced, as well as that he or she should be allowed to select the safest indicated anesthetic agent is ludicrous. Those are things that should all be ascertained by the surgeon himself, or better still by the internist associated with him, long before operation. Any man who fails in this is not fit to do even the simplest form of surgery.

The administration of an anesthetic is an art and a woman becomes much more proficient than a man.

The only argument for the physician anesthetist is that it puts ten dollars more or less in his pocket while the patient receives poorer service.

Good surgery does not depend so much upon the skill of the man who holds the knife as it does upon team-work by all who take part in the operation. The most capable surgeon in the country does poor work unless he has assistants trained to work with him, and the well trained nurse anesthetist is the most important of his assistants.

Yours truly,

J. WALTER VAUGHAN.

Note: Dr. Vaughan's contentions give expression of the viewpoint of one who seeks to justify the employment of a nurse as an anesthetist. We cannot agree that a trained nurse is a better, skillful or competent anesthetist than a physician who makes anesthesia his specialty. The expert medical anesthetist is trained to care for his patient and does not permit the surgeon's activities to arrest his attention. More might be said—we are waiting for the trained anesthetists to reply to Doctor Vaughan.

EDITOR.

Big Rapids, Michigan, Nov. 13, 1916.

Editor, Journal Michigan State Med. Society,
Grand Rapids, Michigan.

Dear Sir:

In the annual report of the Council of the State Society at the Houghton meeting, expression was given to some criticisms that had come from various counties in the state where the tuberculosis survey had been held, to the Chairmen of the Council. Neither the chairman nor any member of the council passing upon this report claimed to have any personal knowledge of the method of procedure in this survey. We were in sympathy with the avowed purpose of the survey and desired to see it successful and the object in view in mentioning it in the report was to bring out facts and bring those facts to the attention of the profession in the state. The reference to the survey in the report was not approved by the House of Delegates, but through some oversight the report was nevertheless published.

I have, during the past week, had an opportunity to observe the methods of the gentlemen engaged in conducting this survey in Mecosta County. I devoted as much time as was possible to attendance upon the clinics and entertained the members at my home, together with the members of the Mecosta County Medical Society, and Dr. Rich of Detroit conducted there a clinic upon several patients whom he selected during the afternoon to appear before the physicians in the evening.

Among the criticisms that came to me previous to last Ausust were those concerning the publicity methods in which it was alleged that there was too much personal advertising of the director, Dr. DeKline. There was no criticism of this kind pertinent in regard to the work in this county. The publicity methods were only such as I consider are perfectly proper to use. It is necessary, in order to bring the force of this investigation properly to the attention of the public, that publicity methods be used. In the work in this country there was no advertising of individuals. There was ample publicity of a proper kind, but it was all done in the name of the State Board of Health. This I believe, is entirely proper and the way the work should be done.

In regard to the clinical work, I cannot speak in too high terms. The examiners were all competent men and are so recognized in the medical circles of this state. Personally I wish to admit that I received some very valuable information during the few days of the clinic. All of the physicians in this city took great interest in the work and all are free to say that they benefited very much by the opportunity of associating with the splendid gentlemen who are devoting their time to this labor and receiving therefor very small compensation.

We were simply astounded at the number of cases coming up for examination. Nearly three hundred were actually examined and a very high percentage of that number were found to show some evidence of having tuberculosis. A great many of them were old cases that had been healed years ago, some of whom were showing a tendency to renewed activity of the disease, but by far the greatest number were cases who had not consulted a physician, who knew not what their trouble was further than that they were losing weight and feeling a little below par. The methods of physical examination and of applying the tuberculin tests it is quite needless to say were modern and well in advance of methods used by the average general practitioner. I am inclined to think that some of the practitioners in the state who have been sending in criticisms of the work of this clinic have not themselves attended the clinic and observed the methods used. Perhaps they are themselves unable to recognize incipient cases of the disease and therefore too hastily denounce the diagnosis of these examiners. For my own part

I am willing to admit that the man who is devoting his special attention to physical examinations and to the other tests made use of by the examiners to determine the presence of tuberculosis, is entitled to great respect for his opinion. It is not to be supposed, and it is not claimed by them, that their reports in every case are infallible. That would be an impossible result for any man to achieve in a single examination. I am satisfied that a great majority of the cases marked positively as Tb. infection will demonstrate themselves sooner or later to have that disease.

I am, however, more convinced even than I was last August that some of the physicians connected with this survey should favor the *Journal* of the State Society with more detailed reports of the work they are doing. I think there should be a report of many of the cases they see at every clinic. Particularly there should be a summary of the number of examinations and the number of active cases found in every county visited, and this information should be published in the Journal of the State Society so that our members may have an opportunity to judge of the work being done along this line.

It affords me pleasure to commend the work as it was conducted in Mecosta County and to recommend to physicians in counties to be visited in the future that they place themselves in touch with the clinic while it is in their midst and assure them they will receive nothing but profit from the association.

Very truly yours,

W. T. DODGE.

Deaths

Dr. Abner Hayward, 86 years old, one of the oldest physicians of Mt. Clemens died October 19 at his home. He was stricken with paralysis about a year ago. He came to this city in 1871 and was identified with the early history of the mineral baths and the development of bathing. He was highly respected by all who knew him.

Dr. A. P. Ohlmacher, of Detroit, died at Grace Hospital, Thursday night, November 9th. He was the author of a number of well known medical works written around his own research. He has been professor in a number of colleges and was director of pathological laboratories.

State News Notes

FOR SALE—Heinzelman Brothers Carriage, two passenger coupe.

It has Timken bearing running gear. Rubber tire. Oil lamps. Can be put on runners for winter. Upholstered in leather. Everything in first class running order. Fine looking rig.

S. L. Rozema, M.D.
425 Eastern Ave.
Grand Rapids.

The recent indictment by the Federal Grand jury in Newark, N. J., of "Dr." Jean F. Strandgaard, of Toronto, Canada, and George F. Hardacre, of Toronto, and a steward on the steamship "United States," has revealed to Chief Inspector E. R. Norwood, of the Customs Service in New York, what he believes to be a widespread conspiracy to defraud the Government out of customs revenue by smuggling salvarsan and neosalvarsan into the United States.

A most serious feature of this matter is the discovery by Inspector Norwood that these men also had in their possession a large quantity of spurious neosalvarsan. Upon analysis by the Government experts, the contents proved to be starch in the majority of the ampules and strained table salt in the others.

A further investigation showed that during July, 1916, Strandgaard had 15,000 ampules made in Jersey City, which upon his instructions were filled by the glass blower with either starch or salt. A remarkable coincidence is that during August and September, and as recently as the time Strandgaard was arrested in New York, physicians and drug stores all over the Middle West and the East were approached by women trying to sell, on the one pretense or another, the frauds made for Strangaard. These spurious products were put up in imitation of either the German or particularly the English package, as marketed by the German manufacturers in England before the war, in square pasteboard cartons. They did not appear in round aluminum packages, like the American package. They are very cleverly executed, and their outside appearance even led experienced physicians to be deceived.

The product has been sold in New York, Chicago, Milwaukee, Cincinnati, Peoria, Kalamazoo, Detroit, Terre Haute and Mobile, and other Western and Southern cities, and is undoubtedly still being peddled on account of the great profits accruing to the saleswomen.

There is no need to call the attention of physicians to the dangers connected with the use of such frauds. In view of the serious and possibly fatal results which would follow the administration of these fraudulent salvarsans, it is incumbent upon medical men who have any information about the distribution or sale of these frauds to communicate with Chief Inspector E. R. Norwood, U. S. Customs House, New York, at their earliest oportunity, or, in case of emergency, with the local police authorities.

Considerable interest has been aroused in medical circles by the announcement of the election of Mr. Louis R. Curtis, for 18 years Superintendent and Secretary of St. Lukes' Hospital, Chicago, as President of that Institution.

Mr. Curtis was born in 1865 in Philadelphia. He obtained his college training at Stevens, graduating as mechanical engineer. In 1889 he entered the hospital field as Assistant Superintendent of the

New York Hospital. During that period he attended medical college, not with an idea of practicing, but to better fit himself for his hospital work. From the New York Hospital Mr. Curtis went to the General Hospital of Elizabeth, New Jersey, staying there for about one and one-half years. From there he came to St. Lukes' Hospital, Chicago, as Superintendent and has been the dominating figure in that Institution, both as Superintendent and Secretary, until recently, and is now Vice-President in charge of the operation of the Institution. During the last years Mr. Curtis has also been prominent as a consulting engineer, especially among hospitals, and has introduced many advanced and successful ideas in hospital construction and organization. His wide experience among hospitals and medical men, coupled with his technical training, makes him peculiarly well fitted for his new position.

Mr. Frank S. Betz, under whose control the concern bearing his name assumed its present proportions, will continue with the Company as Chairman of the Board of Directors and give the organization the benefits of his long experience and training. His many and diversified interests are given as reasons for his retiring as active head of the Company.

The National Board of Medical Examiners held its first examination from October 16 to 21, in Washington, D. C.

There were thirty-two applicants from seventeen states, representing twenty-four medical schools, and of these sixteen were accepted as having the necessary preliminary and medical qualifications, ten of whom took the examination.

The following men passed:

Dr. Harry Sidney Newcomer, Johns Hopkins University.

Dr. William White Southard, Johns Hopkins University.

Dr. Orlow Chapin Snyder, University of Michigan.

Dr. Thomas Arthur Johnson, Rush Medical School.

Dr. Hjorleifur T. Kristjanson, Rush Medical School.

The second examination will be held in Washington, D. C., June, 1917. Further information may be had by applying to Dr. J. S. Rodman, Secretary, 2106 Walnut street, Philadelphia, Pa.

Rockford, Illinois, formerly Dr. Broughton's Sanitarium, established 1901, for the treatment of opium, morphine and other drug addictions, including alcohol and special nervous cases, is one of the best managed institutions in the middle west.

The demand for reputable institutions of this class has increased, and our endorsement of this institution should be sufficient recommendation to physicians who have cases of this kind needing sanitarium treatment. Patients receive good care, humane treatment and enjoy the comforts of a good home.

Dr. Kellog Speed, of Chicago, who has recently returned after six months service in charge in a Base Hospital in France, will address the Kent County Medical Society on December 6th. His address will be illustrated with numerous lantern slides.

The following surgeons of Detroit were made Fellows of the American College of Surgeons at the Philadelphia meeting: W. J. Cassidy, W. A. Hackett, C. H. Judd, R. D. McLure, G. E. Potter.

Dr. C. B. Burr, of Flint, addressed the Kent County Medical Society on Nov. 22.

Dr. A. T. Laberge, of Detroit, has been appointed Health Officer of Grosse Point Township.

Dr. Geo. G. Caron, of Detroit, has moved his offices to the Kresge building.

Mercy Hospital, Bay City, graduated a class of six nurses on Nov. 11th.

Dr. H. R. Pitz, of Kalamazoo, has removed to Detroit. He will limit his practice to diseases of the eye.

Dr. M. C. Sinclair, of Grand Rapids, is seriously ill with but little hope of recovery.

County Society News

EATON COUNTY

The Eaton County Medical Society held it's fifth regular meeting at Eaton Rapids, Thursday, Oct. 5, 1916.

The Scientific Program as follows:.. .. ..

1. "Clinic in Neurology."
   By Carl D. Camp, M.D. of Ann Abor.
2. "Hospital in a Small Town."
   By A. J. Bower, M. D. of Greenville.

The clinic by Dr . Camp was one of the most instructive clinics ever conducted before our Society, especially for the general practioner. Also the paper by Dr. Bower proved to be most interesting. A general discussion followed.

A report of the State Medical meeting at Houghton given by Dr. F. J. Knight proved that all guests at this meeting were royally entertained, enjoying a real outing as well as a fine scientific program.

Following the meeting members and guests were entertained by the Eaton Rapids physicians at an informal dinner.

GRATIOT-ISABELLA-CLARE COUNTY

The Gratiot-Isabella-Clare County Medical Society held its annual banquet for the members and their wives at St. John's Episcopal Church, in Alma, on Thursday, November 9th at 6:30 o'clock p. m. President Biddle was with us and desired to give a

clinic on Dermatology at Brainerd's Hospital at 3:30. The ladies were entertained by Mrs. Brainerd and the wives of the Alma physicians. After dinner President Biddle addressed us on the modern relation of the physician to Public Health questions. Rev. Frank Jackson was called on and by his remarks showed he was deeply interested in the social and public health side of medicine. All agreed that we had both a profitable and enjoyable meeting and social time.

LAPEER COUNTY

The Lapeer County Medical Society met on Tuesday, Nov. 7, 1916 at Lum, Mich. as the guest of Dr. N. D. McVicar. The regular order of business was dispensed with until after we were given very instructive talks by Drs. T. A. McGraw, Jr., and B. R. Shurly of Detroit Mich.

Dr. McGraw showed us how the Allen treatment of Diabetes should be administered in order to obtain the best results and put it in such a way that one could not help but realize where the treatment had been given by many of us without considering the essential factors of caloric value of the different foods, and thereby not getting the desired results.

Dr. Shurly talked on the local infections with special stress put on the differential diagnosis. He handled the subject in a very capable manner and left an impression on the members of the society that will be remembered for a long time.

The business end of the meeting was then taken up and the principle item of interest was in the passing a motion to the effect that the dues of the County Society he made $1.50 instead of $1.00. This will make the total State and County dues for next year $5.00 instead of $4.50.

After the meeting we were entertained by Dr. McVicar and his wife at a delightful luncheon which was thoroughly appreciated by those present.

The meeting proved a success in every way, although we could have had a little larger attendance. The next meeting will be the annual meeting at Lapeer which will give the members a chance to be the guests of the Lapeer members. Election of officers and payment of dues will be the head attractions for the meeting.

J. H. DOUGLASS, Secretary.

ST. CLAIR COUNTY

The St. Clair County Medical Society held its regular monthly meeting at the Harrington Hotel, Thursday evening, November 16. Dr. H. McCallum of London, Ont., being our guest for the evening. After being served with a very fine dinner the President, Dr. McKenzie introduced Dr. H. McCallum who gave a very fine address on "The Different Phases of the Nervous System," which was appreciated by all. The attendance at this meeting was the largest of any held during the year, over fifty being present.

The St. Clair County Medical Society held an open meeting at the Elk's Temple, Thursday evening, November 2nd, which was attended by a large number of citizens.

Dr. DeKleine, of Lansing, was our guest for the evening and gave a very interesting talk on Tuberculosis, advocating the building of a County Sanitarium. At the election on Nov. 7th the county voted to bond for $15,000 to build a sanitorium on the property presented by Mr. and Mrs. Baird. Drs. McCue of Goodell's, Chester of Emmett and Willson of Port Huron also made short addresses.

TRI COUNTY

A meeting of the Tri County Medical Society was held at the County Building on Nov. 2, 1916, when the following officers were elected:

President—Dr. John F. Gruber, Mesick.

Vice-President—Dr. C. E. Miller, Cadillac.

Second Vice-President—Dr. D. Johnson, Marion.

Secretary-Treasurer—Dr. S. C. Moore, Cadillac.

Delegate of the State Society—Dr. Stickley, Mesick.

Alternate of the State Society—Dr. S. E. Neihardt, South Boardman.

Resolutions were adopted favoring the Tuberculosis Survey.

Miscellany

PROPAGANDA FOR REFORM.

Nuxated Iron.—Nuxated Iron is advertised in newspapers with the claim that it is not a patent medicine or secret remedy. In the popular meaning of the words, "Nuxated Iron" is just as much a "patent medicine" as is "Peruna," "Lydia Pinkham's" or "Pierce's Favorite Presciption." Also, "Nuxated Iron" is essentially secret in composition. While the public is led to believe that the preparation consists chiefly of nux vomica and iron, analyses made in the A.M.A. Chemical Laboratory and elsewhere indicate that it contains much less than an ordinary dose of iron and practically no nux vomica. It is sold under claims that are both directly and inferentially false and misleading not only as regards its composition but also as regards its alleged therapeutic effects. Nuxated Iron is also advertised in the Medical Brief, a publication which has for its editor the "medical expert" for the Wine of Cardui concern in the recent case against the American Medical Association and as its publisher one who, through the "National Druggist," has long been the mouthpiece of the "patent medicine" interests (*Jour. A.M.A.*, Oct. 21, 1916, p. 1244).

The Michigan State Medical Society

OFFICERS OF THE SOCIETY

President .....ANDREW P. BIDDLE ....Detroit
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Secretary .....F. C. WARNSHUIS...Grand Rapids
Treasurer .....D. E. WELSH.....Grand Rapids
Editor .....F. C. WARNSHUIS...Grand Rapids

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W. J. KAY .....Vice Chairman
F. C. WARNSHUIS .....Secretary Ex-Officio
ANDREW P. BIDDLE .....Member Ex-Officio

			Term Expires
G. L. KIEFER	1st	Detroit	1921
A. E. BULSON	2nd	Jackson	1918
S. K. CHURCH	3rd	Marshall	1921
A. H. ROCKWELL	4th	Kalamazoo	1917
W. J. DuBOIS	5th	Grand Rapids	1917
A. M. HUME	6th	Owosso	1921
W. J. KAY	7th	Lapeer	1917
A. L. SEELEY	8th	Mayville	1918
B. H. McMULLEN	9th	Cadillac	1918
C. H. BAKER	10th	Bay City	1917
W. T. DODGE	11th	Big Rapids	1921
R. S. BUCKLAND	12th	Baraga	1918
F. C. WITTER	13th	Petoskey	1921
C. T. SOUTHWORTH	14th	Monroe	1917

COUNCILOR DISTRICTS

FIRST DISTRICT—Macomb, Oakland, Wayne.

SECOND DISTRICT—Hillsdale, Ingham, Jackson.

THIRD DISTRICT—Branch, Calhoun, Eaton, St. Joseph.

FOURTH DISTRICT—Allegan, Berrien, Cass, Kalamazoo, Van Buren.

FIFTH DISTRICT—Barry, Ionia, Kent, Ottawa.

SIXTH DISTRICT—Clinton, Genesee, Livingston, Shiawassee.

SEVENTH DISTRICT—Huron, Lapeer, Sanilac, St. Clair.

EIGHTH DISTRICT—Gratiot, Isabella, Clare, Midland, Saginaw, Tuscola and (Gladwin unattached.)

NINTH DISTRICT—Benzie, Grand Traverse, Manistee, Mason, Tri (Kalkaska, Missaukee, Wexford.)

TENTH DISTRICT—Bay (including Arenac and Iosco) O. M. C. O. R. O. (Otsego, Montmorency, Crawford, Oscoda, Roscommon and Ogemaw combined.)

ELEVENTH DISTRICT—Mecosta, Montcalm, Muskegon-Oceana, Newaygo, Osceola-Lake.

TWELFTH DISTRICT—Chippewa (including Luce and Mackinaw), Delta, Dickinson-Iron, Gogebic, Houghton (including Baraga and Keweenaw), Ontonagon, Marquette-Alger,, Menominee, Schoolcraft.

THIRTEENTH DISTRICT—Alpena (including Alcoma), Antrim, Charlevoix, Cheboygan, Emmet, Presque Isle.

FOURTEENTH DISTRICT—Lenawee, Monroe, Washtenaw.

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A. W. BLAIN, Chairman ..... 1917 .....Detroit
J. C. ANDRIES, Secretary ..... 1917 .....Detroit

GYNECOLOGY AND OBSTETRICS

H. W. HEWITT, Chairman ..... 1917 .....Detroit
H. J. VANDENBURG, Secretary... 1917 .....Grand Rapids

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W. H. SAWYER .....Hillsdale

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F. C. WARNSHUIS, term expires 1917 .....Grand Rapids
A. I. LAWBAUGH, term expires 1917 .....Calumet

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CHAS. KUHN, term expires 1918 .....Detroit

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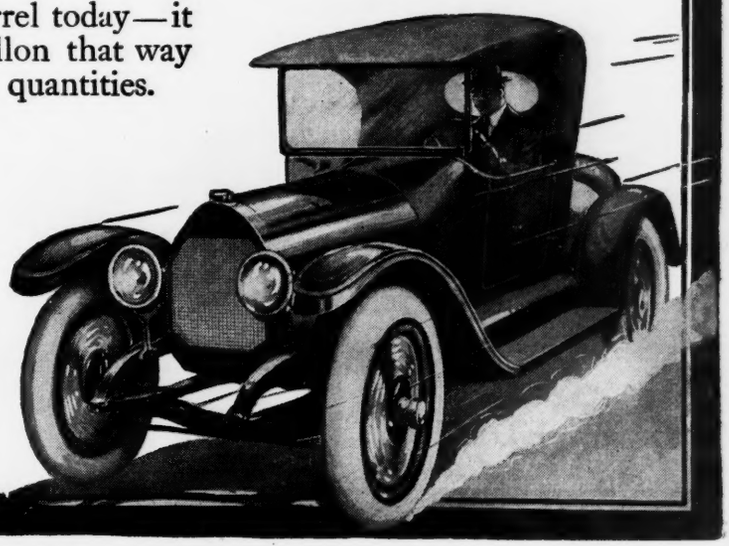

The Secretary of the County Society will please Notify the State Secretary immediately of any error or change in these offices.

COUNTY SOCIETIES

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